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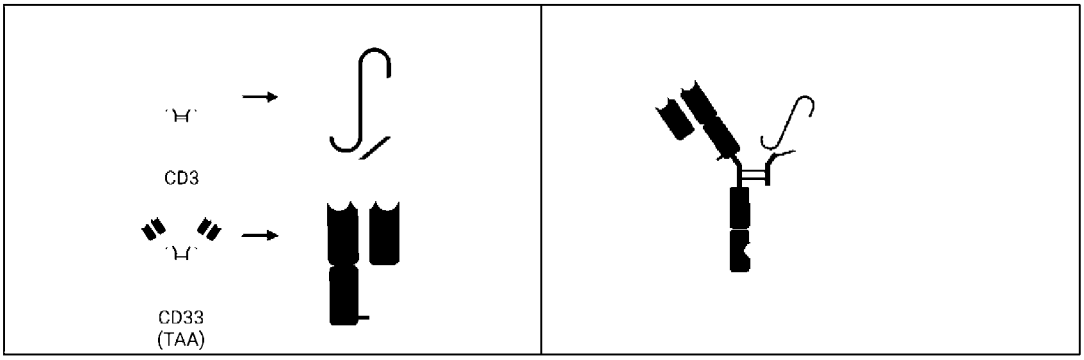
Figure 2



(57) **Abstract:** The present disclosure provides anti-CD3 monoclonal antibodies and related compositions, which may be used in any of a variety of therapeutic and diagnostic methods for the treatment of diseases and disorders, such as cancer and autoimmune diseases and disorders. The present disclosure also relates to bispecific antibodies comprising anti-CD3 antibodies. The present disclosure further relates to methods of treatment using such anti-CD3 monoclonal and bispecific antibodies.

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ANTI-CD3 ANTIBODIES

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to and benefit of United States Provisional Application No. 63/419,257, filed October 25, 2022, and United States Provisional Application No. 63/425,248, filed November 14, 2022, the contents of each application are hereby incorporated by reference in their entireties.

BACKGROUND

Technical Field

[0002] The present disclosure relates generally to anti-CD3 antibodies, compositions and methods of using same. Such antibodies are useful, for example, for targeting T-cells, *e.g.*, as treatments for cancer or autoimmunity. Such antibodies may also be useful, for example, as targeting arms in bispecific antibodies or other multi-specific antibodies.

DESCRIPTION OF THE RELATED ART

[0003] Cluster of differentiation 3 (CD3) is a multimeric protein complex comprising four distinct CD3 polypeptide chains (epsilon (ε), gamma (γ), delta (δ) and zeta (ζ)), which assemble and function as three pairs of dimers (εγ, εδ, ζζ). The assembled CD3 protein acts as a T-cell co-receptor that associates noncovalently with the T-cell receptor (TCR). The CD3 protein complex is a defining feature of the T-cell lineage, such that anti-CD3 antibodies can be used effectively as T-cell markers.

[0004] Anti-CD3 antibodies have been employed clinically for immunosuppression of autoimmune T-cell mediated diseases including organ transplant rejections and type 1 diabetes mellitus. Anti-CD3 bispecific or multi-specific antibodies represent an emerging immuno-oncology therapy. In addition to a CD3 binding arm, such bispecific or multi-specific antibodies also comprise an arm that binds to a tumor-associated antigen expressed on tumor cells and, thus, can simultaneously bind a tumor cell and a T cell. This simultaneous binding results in T-cell activation, proliferation, and the secretion of cytolytic molecules that kill the tumor cells. Some anti-CD3 binding domains deployed in some bispecific or multi-specific antibodies can stimulate the secretion of inflammatory cytokines to detectable levels. One advantage in using anti-CD3 bispecific or multi-specific antibodies compared to engineered T-cell therapy is that any T cell can serve as an effector cell, regardless of TCR specificity.

Because TCR signaling does not require engagement of the antigen-binding domain of the TCR, but is initiated via CD3, anti-CD3 bispecific or multi-specific antibodies can employ all available T cells and are not limited to tumor-specific T cells. By contrast, effective immune checkpoint therapy requires the availability of tumor-specific T cells.

[0005] While an anti-CD3/anti-CD19 bispecific antibody (blinatumomab) has been approved for use in treating B-cell malignancies, other anti-CD3 bispecific antibodies have failed in early clinical trials, with the particular anti-CD3 binding domains used in those antibodies being identified as potential culprits for those failures. *See, e.g.*, Vafa O and Trinklein ND, *Front. Oncol.*, 2020, vol. 10, doi: 10.3389/fonc.2020.00446. Accordingly, there remains a need to identify additional anti-CD3 binding antibodies, bispecific antibodies, and multi-specific antibodies, e.g., improved efficacy or better safety profiles in patients.

SUMMARY OF THE DISCLOSURE

[0006] The present disclosure relates to antibodies that bind CD3. More specifically, it relates to chimeric anti-CD3 antibodies generated from an AlivaMab® Mouse (Ablexis, LLC); fully human anti-CD3 antibodies produced therefrom; bispecific and multi-specific antibodies produced therefrom; compositions comprising such chimeric, human and bispecific or multi-specific antibodies; polynucleotides, vectors and host cells producing such chimeric, human and bispecific or multi-specific antibodies; and methods of making and using such chimeric, human, and bispecific or multi-specific antibodies.

[0007] One aspect of the disclosure provides an isolated anti-CD3 antibody, or an antigen-binding fragment thereof, comprising one to six complementarity determining regions (CDRs) disclosed herein. The one to six CDRs may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 1-687.

[0008] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a heavy chain CDR3 (HCDR3) disclosed herein. The HCDR3 may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 574-687. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a light chain CDR3 (LCDR3) disclosed herein. The LCDR3 may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 227-344.

[0009] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a HCDR1 disclosed herein, a HCDR2 disclosed herein, a HCDR3 disclosed herein, a LCDR1 disclosed herein, a LCDR2 disclosed herein, and a LCDR3 disclosed herein.

[0010] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises i) a heavy chain variable region comprising a HCDR1 disclosed herein, a HCDR2 disclosed herein, and a HCDR3 disclosed herein and ii) a light chain variable region comprising a LCDR1 disclosed herein, a LCDR2 disclosed herein, and a LCDR3 disclosed herein. The HCDR1 may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 345-457. In some embodiments, the HCDR2 comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 458-573. The HCDR3 may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 574-687. In some embodiments the LCDR1 comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 1-113. The LCDR2 may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 114-226. In some embodiments, the LCDR3 comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 227-344.

[0011] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the HCDR1, the HCDR2, the HCDR3, the LCDR1, the LCDR2, and the LCDR3 of an antibody disclosed herein. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises i) a heavy chain variable region comprising the HCDR1, the HCDR2, and the HCDR3 of an antibody disclosed herein and ii) a light chain variable region comprising the LCDR1, the LCDR2, and the LCDR3 of the same antibody. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the heavy chain variable ("VH") region of an antibody disclosed herein. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise the light chain variable ("VL") region of an antibody disclosed herein. In some embodiments, the antibody, or antigen-binding fragment thereof, comprises the VH and VL of an antibody disclosed herein. The CDRs, VH, and/or VL may be from an antibody selected from the group consisting of ABL-CD3-1 to ABL-CD3-113, ABL-CD3-1A to ABL-CD3-113A, and ABL-CD3-85B. In some embodiments, the CDRs, VH, and/or VL may be from an antibody selected from the group consisting of ABL-CD3-18, ABL-CD3-20, ABL-CD3-21, ABL-CD3-22, ABL-CD3-27, ABL-CD3-29, ABL-CD3-31, ABL-CD3-34, ABL-CD3-36, ABL-CD3-37, ABL-CD3-39, ABL-CD3-40, ABL-CD3-41, ABL-CD3-43, ABL-CD3-44, ABL-CD3-45, ABL-CD3-47, ABL-CD3-49, ABL-CD3-52, ABL-CD3-53, ABL-CD3-56, ABL-CD3-57, ABL-CD3-61, ABL-CD3-62, ABL-CD3-63, ABL-CD3-64, ABL-CD3-65, ABL-CD3-66, ABL-CD3-68, ABL-CD3-71, ABL-CD3-72, ABL-CD3-74, ABL-CD3-76, ABL-CD3-77, ABL-CD3-79, ABL-CD3-81, ABL-CD3-85, ABL-CD3-87, ABL-CD3-88, ABL-CD3-89, ABL-CD3-18A, ABL-CD3-20A, ABL-CD3-

21A, ABL-CD3-22A, ABL-CD3-27A, ABL-CD3-29A, ABL-CD3-31A, ABL-CD3-34A, ABL-CD3-36A, ABL-CD3-37A, ABL-CD3-39A, ABL-CD3-40A, ABL-CD3-41A, ABL-CD3-43A, ABL-CD3-44A, ABL-CD3-45A, ABL-CD3-47A, ABL-CD3-49A, ABL-CD3-52A, ABL-CD3-53A, ABL-CD3-56A, ABL-CD3-57A, ABL-CD3-61A, ABL-CD3-62A, ABL-CD3-63A, ABL-CD3-64A, ABL-CD3-65A, ABL-CD3-66A, ABL-CD3-68A, ABL-CD3-71A, ABL-CD3-72A, ABL-CD3-74A, ABL-CD3-76A, ABL-CD3-77A, ABL-CD3-79A, ABL-CD3-81A, ABL-CD3-85A, ABL-CD3-85B, ABL-CD3-87A, ABL-CD3-88A, and ABL-CD3-89A

[0012] The HCDR1 may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 345-457. In some embodiments, the HCDR2 comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 458-573. The HCDR3 may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 574-687. In some embodiments the LCDR1 comprises an amino acid sequence selected from the group consisting of SEQ ID NOs:1-113. The LCDR2 may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 114-226. In some embodiments, the LCDR3 comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 227-344. In some embodiments, the VL region comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 688-914. The VH region may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 915-1141.

[0013] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, is human. In some embodiments, the antibody is chimeric. In certain embodiments, the antibody is selected from a single-variable domain antibody, single chain antibody, a scFv, a bispecific antibody, a multi-specific antibody, a Fab, a F(ab')2, and a whole antibody. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, is a bispecific antibody.

[0014] In some embodiments, the anti-CD3 antibody is an IgG antibody. The anti-CD3 antibody may be an IgM antibody. In some embodiments, the anti-CD3 antibody is an IgA antibody. The anti-CD3 antibody may be an IgD antibody. The anti-CD3 antibody may be an IgE antibody. In some embodiments, the anti-CD3 antibody is an IgG1 antibody. The anti-CD3 antibody may be an IgG2 antibody. In some embodiments, the anti-CD3 antibody is an IgG3 antibody. The anti-CD3 may be an IgG4 antibody. In some embodiments, the anti-CD3 antibody is a variant of an IgG antibody, such as a variant of an IgG1, an IgG2, an IgG3 or an IgG4 or combinations thereof. The anti-CD3 antibody may have reduced effector function or

no effector function. In some embodiments, the anti-CD3 antibody is engineered to reduce or eliminate effector function.

[0015] An additional aspect of the disclosure provides an anti-CD3 bispecific antibody. In some embodiments, the anti-CD3 bispecific antibody further comprises a targeting antibody, or an antigen-binding fragment thereof. In some embodiments, the targeting antibody is an anti-tumor antibody, or an antigen-binding fragment thereof.

[0016] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a complete heavy chain, comprising a first Fc domain, and a complete light chain. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a single-chain Fv (scFv), Fab, Fab', $F(ab')_2$ or an Fv fragment operably linked to a first Fc domain. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a single-chain Fv (scFv) operably linked to a first Fc domain.

[0017] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a first Fc domain. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, is operably linked to the first Fc domain via a first linker. In some embodiments, the first linker is an antibody hinge region. In some embodiments, the first linker is a variable length Gly-Ser linker. In some embodiments, the first linker comprises a linker selected from the group consisting of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1238), (Ser-Ser-Ser-Ser-Gly)n (SEQ ID NO: 1147), (Gly-Ser-Ser-Gly-Gly)n (SEQ ID NO: 1148), and (Gly-Gly-Ser-Gly-Gly)n (SEQ ID NO: 1149), where n is an integer between 1 and 5. In some embodiments, the first linker comprises the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1237), wherein n is 1. In some embodiments, the first linker comprises the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4.

[0018] In some embodiments, the targeting antibody is an anti-tumor antibody. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, comprises a second Fc domain. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, is operably linked to a second Fc domain via a second linker. In some embodiments, the second linker is an antibody hinge region. In some embodiments, the second linker is a variable length Gly-Ser linker. In some embodiments, the second linker comprises a linker selected from the group consisting of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1238), (Ser-Ser-Ser-Ser-Gly)n (SEQ ID NO: 1147), (Gly-Ser-Ser-Gly-Gly)n (SEQ ID NO: 1148), and (Gly-Gly-Ser-Gly-Gly)n (SEQ ID NO: 1149), where n is an integer between 1 and 5. In some embodiments, the second linker comprises the amino acid sequence of (Gly-Gly-Gly-Gly-

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Ser)n (SEQ ID NO: 1146), wherein n is 1. In some embodiments, the second linker comprises the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4.

[0019] In some embodiments, the first and second Fc domains comprises mutations to promote heterodimer formation. In some embodiments, the first Fc domain comprises a T366W mutation and the second Fc domain comprises T366S/L368A/Y407V mutations. In some embodiments, the first Fc domain comprises T366S/L368A/Y407V mutations and the second Fc domain comprises a T366W mutation. In some embodiments, the first and second Fc domains comprise KIH_{S-S} mutations. In some embodiments, the first Fc domain comprises S354C/T366W mutations and the second Fc domain comprises Y349C/T366S/L368A/Y407V mutations. In some embodiments, the first Fc domain comprises Y349C/T366S/L368A/Y407V mutations and the second Fc domain comprises S354C/T366W mutation. In some embodiments, the first Fc domain comprises S354C/T366W mutations and the second Fc domain comprises Y349C/T366S/L368A/Y407V/H435R/Y436F mutations. In some embodiments, the first Fc domain comprises Y349C/T366S/L368A/Y407V/H435R/Y436F mutations and the second Fc domain comprises S354C/T366W mutation. In some embodiments, the first Fc domain comprises S354C/T366W/H435R/Y436F mutations and the second Fc domain comprises Y349C/T366S/L368A/Y407V mutations. In some embodiments, the first Fc domain comprises Y349C/T366S/L368A/Y407V mutations and the second Fc domain comprises S354C/T366W/H435R/Y436F mutations. Each of the foregoing mutations is according to EU numbering.

[0020] In some embodiments, the first Fc domain comprises the amino acid sequence of SEQ ID NO: 1142. In some embodiments, the first Fc domain comprises the amino acid sequence of SEQ ID NO: 1143. In some embodiments, the second Fc domain comprises the amino acid sequence of SEQ ID NO: 1142. In some embodiments, the second Fc domain comprises the amino acid sequence of SEQ ID NO: 1143. In some embodiments, the first and second Fc domains comprise the amino acid sequences of SEQ ID NOs: 1142 and 1143, respectively. In some embodiments, the first and second Fc domains comprise the amino acid sequences of SEQ ID NOs: 1143 and 1142, respectively. In some embodiments, the anti-CD3 antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1144. In some embodiments, the anti-CD3 antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1145. In some embodiments, the anti-tumor antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1144. In some embodiments, the anti-tumor antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1145. In some embodiments, the anti-CD3 antibody comprises

a constant region comprising the amino acid sequence of SEQ ID NO: 1144, and the anti-tumor antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1145. In some embodiments, the anti-CD3 antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1145, and the anti-tumor antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1144.

[0021] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1144. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1145. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1144. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1145. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1144, and the anti-tumor antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1145. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1145, and the anti-tumor antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1144.

[0022] In some embodiments, the anti-tumor antibody is an anti-CD33 antibody. In some embodiments, the anti-CD33 antibody comprises the six CDRs of gemtuzumab. In some embodiments, the anti-CD33 antibody comprises the VH of gemtuzumab. In some embodiments, the anti-CD33 antibody comprises the VL of gemtuzumab. In some embodiments, the anti-CD33 antibody comprises the VH and the VL of gemtuzumab. In some embodiments, the heavy chain of the anti-CD33 antibody comprises the amino acid sequence of SEQ ID NO: 1150. In some embodiments, the light chain of the anti-CD33 antibody comprises the amino acid sequence of SEQ ID NO: 1151. In some embodiments, the heavy chain of the anti-CD33 antibody comprises the amino acid sequence of SEQ ID NO: 1150, and the light chain of the anti-CD33 antibody comprises the amino acid sequence of SEQ ID NO: 1151.

[0023] One aspect of the disclosure provides a recombinant polynucleotide encoding the anti-CD3 antibody, or antigen-binding fragment thereof, of the disclosure or an anti-CD3

bispecific antibody of the disclosure. Another aspect of the disclosure provides a recombinant polynucleotide encoding the anti-CD3 antibody, or antigen-binding fragment thereof, of the disclosure or an anti-CD3 multi-specific antibody of the disclosure. Another aspect of the disclosure provides vector, such as an expression vector, comprising the recombinant polynucleotide. In another aspect of the disclosure provides an isolated host cell that comprises the recombinant polynucleotide or the vector. An additional aspect of the disclosure provides methods of making the anti-CD3 antibody, or antigen-binding fragment thereof, of the disclosure or an anti-CD3 bispecific antibody of the disclosure. One aspect of the disclosure provides a composition comprising an anti-CD3 antibody, or antigen-binding fragment thereof, of the disclosure or an anti-CD3 bispecific antibody of the disclosure and a physiologically acceptable carrier.

[0024] A further aspect of the disclosure provides methods of treating or preventing cancer in a subject in need thereof by administering an anti-CD3 antibody, or antigen-binding fragment thereof, or bispecific or multi-specific antibody of the disclosure or a composition comprising the antibody or fragment or bispecific or multi-specific antibody to a subject in need thereof. One aspect of the disclosure provides a method of maintaining cancer remission in a subject by administering an anti-CD3 antibody, or antigen-binding fragment thereof, or bispecific or multi-specific antibody of the disclosure or a composition comprising the antibody or fragment or bispecific antibody to a subject in need thereof. An additional aspect of the disclosure provides a method of redirecting a T-cell to a tumor cell, wherein the method comprises contacting the T-cell with an anti-CD3 bispecific or multi-specific antibody, or antigen-binding fragment thereof, of the disclosure or a composition comprising the bispecific or multi-specific antibody or fragment. In some embodiments, bispecific or multi-specific antibody or fragment further comprises a tumor-targeting arm. A further aspect of the invention provides a method of treating cancer by administering an anti-CD3 bispecific or multi-specific antibody, or antigen-binding fragment thereof, of the disclosure or a composition comprising the antibody or fragment to a subject in need thereof, wherein the bispecific or multi-specific antibody or fragment further comprises a tumor-targeting arm.

[0025] Another aspect of the disclosure provides methods of treating or preventing an autoimmune disease or disorder in a subject in need thereof by administering an anti-CD3 antibody, or antigen-binding fragment thereof, or bispecific or multi-specific antibody of the disclosure or a composition comprising the antibody or fragment or bispecific or multi-specific antibody to a subject in need thereof.

BRIEF DESCRIPTION OF THE FIGURES

[0026] **Figure 1A and Figure 1B** provide the results of the flow cytometric analysis of purified monoclonal antibodies. Briefly, flow cytometry was performed at concentration 1 µg/ml against Jurkat wild-type and knock-out cells and human Pan-T cells. Log geometric mean florescent intensity (gMFI) values were plotted for each hit comparing Jurkat wild-type and knock-out cells (**Figure 1A**) and Jurkat wild-type and Pan-T cells (**Figure 1B**).

[0027] **Figure 2** provides a schematic of the formation of a CD3-CD33 bispecific antibody.

[0028] **Figure 3A** provides a schematic of a Killing Immune-Lysis Reaction (KILR) HL60 T Cell Redirection assay protocol. **Figure 3B** demonstrates the assessment of CD-3xCD33 bispecific antibodies for their ability to mediate interactions between effector and target cells leading to target-mediated cytotoxicity.

[0029] **Figure 4A and Figure 4B** provide the results of quantitative ELISA assays against the cytokines IL2 (**Figure 4A**) and IFNγ (**Figure 4B**).

[0030] **Figures 5A-5D** provide the results of Killing Immune-Lysis Reaction (KILR) T Cell Redirection (TCR) assays for four human PBMC donors (Donor 1 (Figure 5A), Donor 2 (Figure 5B), Donor 3 (Figure 5C), and Donor 0 (Figure 5D)).

[0031] **Figure 6A** provides the results of an ELISA employed to measure polyspecific/nonspecific antibody binding to ds DNA and ss DNA, cardiolipin, insulin, lipopolysaccharide, and Hemocyanin. **Figure 6B** provides the results of an ELISA employed to measure polyspecific/nonspecific antibody binding Baculovirus Particles. **Figure 6C** provides results of the retention time of the antibody measured on a HIC-butyl column with less hydrophobic species eluting earlier and more hydrophobic species eluting later.

BRIEF DESCRIPTION OF THE SEQUENCES

Table 1A. Anti-CD3 Antibody Amino Acid Sequence Identifiers

Antibody	LCDR1	LCDR2	LCDR3	HCDR1	HCDR2	HCDR3	VL	VH
ABL-CD3-1	1	114	227	345	458	574	688	915
ABL-CD3-2	2	115	228	346	459	575	689	916
ABL-CD3-3	3	116	229	347	460	576	690	917
ABL-CD3-4	4	117	230	348	461	577	691	918
ABL-CD3-5	5	118	231	349	462	578	692	919
ABL-CD3-6	6	119	232	350	463	579	693	920
ABL-CD3-7	7	120	233	351	464	580	694	921
ABL-CD3-8	8	121	234	352	465	581	695	922
ABL-CD3-9	9	122	235	353	466	582	696	923

Antibody	LCDR1	LCDR2	LCDR3	HCDR1	HCDR2	HCDR3	VL	VH
ABL-CD3-10	10	123	236	354	467	583	697	924
ABL-CD3-11	11	124	237	355	468	584	698	925
ABL-CD3-12	12	125	238	356	469	585	699	926
ABL-CD3-13	13	126	239	357	470	586	700	927
ABL-CD3-14	14	127	240	358	471	587	701	928
ABL-CD3-15	15	128	241	359	472	588	702	929
ABL-CD3-16	16	129	242	360	473	589	703	930
ABL-CD3-17	17	130	243	361	474	590	704	931
ABL-CD3-18	18	131	244	362	475	591	705	932
ABL-CD3-19	19	132	245	363	476	592	706	933
ABL-CD3-20	20	133	246	364	477	593	707	934
ABL-CD3-21	21	134	247	365	478	594	708	935
ABL-CD3-22	22	135	248	366	479	595	709	936
ABL-CD3-23	23	136	249	367	480	596	710	937
ABL-CD3-24	24	137	250	368	481	597	711	938
ABL-CD3-25	25	138	251	369	482	598	712	939
ABL-CD3-26	26	139	252	370	483	599	713	940
ABL-CD3-27	27	140	253	371	484	600	714	941
ABL-CD3-28	28	141	254	372	485	601	715	942
ABL-CD3-29	29	142	255	373	486	602	716	943
ABL-CD3-30	30	143	256	374	487	603	717	944
ABL-CD3-31	31	144	257	375	488	604	718	945
ABL-CD3-32	32	145	258	376	489	605	719	946
ABL-CD3-33	33	146	259	377	490	606	720	947
ABL-CD3-34	34	147	260	378	491	607	721	948
ABL-CD3-35	35	148	261	379	492	608	722	949
ABL-CD3-36	36	149	262	380	493	609	723	950
ABL-CD3-37	37	150	263	381	494	610	724	951
ABL-CD3-38	38	151	264	382	495	611	725	952
ABL-CD3-39	39	152	265	383	496	612	726	953
ABL-CD3-40	40	153	266	384	497	613	727	954
ABL-CD3-41	41	154	267	385	498	614	728	955
ABL-CD3-42	42	155	268	386	499	615	729	956
ABL-CD3-43	43	156	269	387	500	616	730	957
ABL-CD3-44	44	157	270	388	501	617	731	958
ABL-CD3-45	45	158	271	389	502	618	732	959
ABL-CD3-46	46	159	272	390	503	619	733	960
ABL-CD3-47	47	160	273	391	504	620	734	961
ABL-CD3-48	48	161	274	392	505	621	735	962
ABL-CD3-49	49	162	275	393	506	622	736	963
ABL-CD3-50	50	163	276	394	507	623	737	964
ABL-CD3-51	51	164	277	395	508	624	738	965

Antibody	LCDR1	LCDR2	LCDR3	HCDR1	HCDR2	HCDR3	VL	VH
ABL-CD3-52	52	165	278	396	509	625	739	966
ABL-CD3-53	53	166	279	397	510	626	740	967
ABL-CD3-54	54	167	280	398	511	627	741	968
ABL-CD3-55	55	168	281	399	512	628	742	969
ABL-CD3-56	56	169	282	400	513	629	743	970
ABL-CD3-57	57	170	283	401	514	630	744	971
ABL-CD3-58	58	171	284	402	515	631	745	972
ABL-CD3-59	59	172	285	403	516	632	746	973
ABL-CD3-60	60	173	286	404	517	633	747	974
ABL-CD3-61	61	174	287	405	518	634	748	975
ABL-CD3-62	62	175	288	406	519	635	749	976
ABL-CD3-63	63	176	289	407	520	636	750	977
ABL-CD3-64	64	177	290	408	521	637	751	978
ABL-CD3-65	65	178	291	409	522	638	752	979
ABL-CD3-66	66	179	292	410	523	639	753	980
ABL-CD3-67	67	180	293	411	524	640	754	981
ABL-CD3-68	68	181	294	412	525	641	755	982
ABL-CD3-69	69	182	295	413	526	642	756	983
ABL-CD3-70	70	183	296	414	527	643	757	984
ABL-CD3-71	71	184	297	415	528	644	758	985
ABL-CD3-72	72	185	298	416	529	645	759	986
ABL-CD3-73	73	186	299	417	530	646	760	987
ABL-CD3-74	74	187	300	418	531	647	761	988
ABL-CD3-75	75	188	301	419	532	648	762	989
ABL-CD3-76	76	189	302	420	533	649	763	990
ABL-CD3-77	77	190	303	421	534	650	764	991
ABL-CD3-78	78	191	304	422	535	651	765	992
ABL-CD3-79	79	192	305	423	536	652	766	993
ABL-CD3-80	80	193	306	424	537	653	767	994
ABL-CD3-81	81	194	307	425	538	654	768	995
ABL-CD3-82	82	195	308	426	539	655	769	996
ABL-CD3-83	83	196	309	427	540	656	770	997
ABL-CD3-84	84	197	310	428	541	657	771	998
ABL-CD3-85	85	198	311	429	542	658	772	999
ABL-CD3-86	86	199	312	430	543	659	773	1000
ABL-CD3-87	87	200	313	431	544	660	774	1001
ABL-CD3-88	88	201	314	432	545	661	775	1002
ABL-CD3-89	89	202	315	433	546	662	776	1003
ABL-CD3-90	90	203	316	434	547	663	777	1004
ABL-CD3-91	91	204	317	435	548	664	778	1005
ABL-CD3-92	92	205	318	436	549	665	779	1006
ABL-CD3-93	93	206	319	437	550	666	780	1007

Antibody	LCDR1	LCDR2	LCDR3	HCDR1	HCDR2	HCDR3	VL	VH
ABL-CD3-94	94	207	320	438	551	667	781	1008
ABL-CD3-95	95	208	321	439	552	668	782	1009
ABL-CD3-96	96	209	322	440	553	669	783	1010
ABL-CD3-97	97	210	323	441	554	670	784	1011
ABL-CD3-98	98	211	324	442	555	671	785	1012
ABL-CD3-99	99	212	325	443	556	672	786	1013
ABL-CD3-100	100	213	326	444	557	673	787	1014
ABL-CD3-101	101	214	327	445	558	674	788	1015
ABL-CD3-102	102	215	328	446	559	675	789	1016
ABL-CD3-103	103	216	329	447	560	676	790	1017
ABL-CD3-104	104	217	330	448	561	677	791	1018
ABL-CD3-105	105	218	331	449	562	678	792	1019
ABL-CD3-106	106	219	332	450	563	679	793	1020
ABL-CD3-107	107	220	333	451	564	680	794	1021
ABL-CD3-108	108	221	334	452	565	681	795	1022
ABL-CD3-109	109	222	335	453	566	682	796	1023
ABL-CD3-110	110	223	336	454	567	683	797	1024
ABL-CD3-111	111	224	337	455	568	684	798	1025
ABL-CD3-112	112	225	338	456	569	685	799	1026
ABL-CD3-113	113	226	339	457	570	686	800	1027
ABL-CD3-1A	1	114	227	345	458	574	801	1028
ABL-CD3-2A	2	115	228	346	459	575	802	1029
ABL-CD3-3A	3	116	229	347	460	576	803	1030
ABL-CD3-4A	4	117	230	348	461	577	804	1031
ABL-CD3-5A	5	118	231	349	462	578	805	1032
ABL-CD3-6A	6	119	232	350	463	579	806	1033
ABL-CD3-7A	7	120	233	351	464	580	807	1034
ABL-CD3-8A	8	121	234	352	465	581	808	1035
ABL-CD3-9A	9	122	235	353	466	582	809	1036
ABL-CD3-10A	10	123	236	354	467	583	810	1037
ABL-CD3-11A	11	124	237	355	468	584	811	1038
ABL-CD3-12A	12	125	238	356	469	585	812	1039
ABL-CD3-13A	13	126	239	357	470	586	813	1040
ABL-CD3-14A	14	127	240	358	471	587	814	1041
ABL-CD3-15A	15	128	241	359	472	588	815	1042
ABL-CD3-16A	16	129	242	360	473	589	816	1043
ABL-CD3-17A	17	130	243	361	474	590	817	1044
ABL-CD3-18A	18	131	244	362	475	591	818	1045
ABL-CD3-19A	19	132	245	363	476	592	819	1046
ABL-CD3-20A	20	133	246	364	477	593	820	1047
ABL-CD3-21A	21	134	247	365	478	594	821	1048
ABL-CD3-22A	22	135	248	366	479	595	822	1049

Antibody	LCDR1	LCDR2	LCDR3	HCDR1	HCDR2	HCDR3	VL	VH
ABL-CD3-23A	23	136	249	367	480	596	823	1050
ABL-CD3-24A	24	137	250	368	481	597	824	1051
ABL-CD3-25A	25	138	251	369	482	598	825	1052
ABL-CD3-26A	26	139	252	370	483	599	826	1053
ABL-CD3-27A	27	140	253	371	484	687	827	1054
ABL-CD3-28A	28	141	254	372	485	601	828	1055
ABL-CD3-29A	29	142	255	373	486	602	829	1056
ABL-CD3-30A	30	143	256	374	487	603	830	1057
ABL-CD3-31A	31	144	257	375	488	604	831	1058
ABL-CD3-32A	32	145	258	376	489	605	832	1059
ABL-CD3-33A	33	146	259	377	490	606	833	1060
ABL-CD3-34A	34	147	260	378	491	607	834	1061
ABL-CD3-35A	35	148	261	379	492	608	835	1062
ABL-CD3-36A	36	149	262	380	571	609	836	1063
ABL-CD3-37A	37	150	263	381	494	610	837	1064
ABL-CD3-38A	38	151	264	382	495	611	838	1065
ABL-CD3-39A	39	152	265	383	496	612	839	1066
ABL-CD3-40A	40	153	266	384	497	613	840	1067
ABL-CD3-41A	41	154	340	385	498	614	841	1068
ABL-CD3-42A	42	155	268	386	499	615	842	1069
ABL-CD3-43A	43	156	341	387	500	616	843	1070
ABL-CD3-44A	44	157	270	388	501	617	844	1071
ABL-CD3-45A	45	158	271	389	502	618	845	1072
ABL-CD3-46A	46	159	272	390	503	619	846	1073
ABL-CD3-47A	47	160	273	391	504	620	847	1074
ABL-CD3-48A	48	161	274	392	505	621	848	1075
ABL-CD3-49A	49	162	342	393	506	622	849	1076
ABL-CD3-50A	50	163	276	394	507	623	850	1077
ABL-CD3-51A	51	164	277	395	508	624	851	1078
ABL-CD3-52A	52	165	278	396	509	625	852	1079
ABL-CD3-53A	53	166	279	397	510	626	853	1080
ABL-CD3-54A	54	167	280	398	511	627	854	1081
ABL-CD3-55A	55	168	281	399	512	628	855	1082
ABL-CD3-56A	56	169	282	400	513	629	856	1083
ABL-CD3-57A	57	170	283	401	514	630	857	1084
ABL-CD3-58A	58	171	284	402	515	631	858	1085
ABL-CD3-59A	59	172	285	403	516	632	859	1086
ABL-CD3-60A	60	173	286	404	517	633	860	1087
ABL-CD3-61A	61	174	287	405	518	634	861	1088
ABL-CD3-62A	62	175	288	406	519	635	862	1089
ABL-CD3-63A	63	176	289	407	520	636	863	1090
ABL-CD3-64A	64	177	290	408	521	637	864	1091

Antibody	LCDR1	LCDR2	LCDR3	HCDR1	HCDR2	HCDR3	VL	VH
ABL-CD3-65A	65	178	291	409	572	638	865	1092
ABL-CD3-66A	66	179	292	410	523	639	866	1093
ABL-CD3-67A	67	180	293	411	524	640	867	1094
ABL-CD3-68A	68	181	294	412	525	641	868	1095
ABL-CD3-69A	69	182	295	413	526	642	869	1096
ABL-CD3-70A	70	183	296	414	527	643	870	1097
ABL-CD3-71A	71	184	297	415	528	644	871	1098
ABL-CD3-72A	72	185	298	416	529	645	872	1099
ABL-CD3-73A	73	186	299	417	530	646	873	1100
ABL-CD3-74A	74	187	300	418	531	647	874	1101
ABL-CD3-75A	75	188	301	419	532	648	875	1102
ABL-CD3-76A	76	189	302	420	533	649	876	1103
ABL-CD3-77A	77	190	303	421	534	650	877	1104
ABL-CD3-78A	78	191	304	422	535	651	878	1105
ABL-CD3-79A	79	192	305	423	573	652	879	1106
ABL-CD3-80A	80	193	306	424	537	653	880	1107
ABL-CD3-81A	81	194	307	425	538	654	881	1108
ABL-CD3-82A	82	195	308	426	539	655	882	1109
ABL-CD3-83A	83	196	309	427	540	656	883	1110
ABL-CD3-84A	84	197	310	428	541	657	884	1111
ABL-CD3-85A	85	198	343	429	542	658	885	1112
ABL-CD3-85B	85	198	344	429	542	658	886	1113
ABL-CD3-86A	86	199	312	430	543	659	887	1114
ABL-CD3-87A	87	200	313	431	544	660	888	1115
ABL-CD3-88A	88	201	314	432	545	661	889	1116
ABL-CD3-89A	89	202	315	433	546	662	890	1117
ABL-CD3-90A	90	203	316	434	547	663	891	1118
ABL-CD3-91A	91	204	317	435	548	664	892	1119
ABL-CD3-92A	92	205	318	436	549	665	893	1120
ABL-CD3-93A	93	206	319	437	550	666	894	1121
ABL-CD3-94A	94	207	320	438	551	667	895	1122
ABL-CD3-95A	95	208	321	439	552	668	896	1123
ABL-CD3-96A	96	209	322	440	553	669	897	1124
ABL-CD3-97A	97	210	323	441	554	670	898	1125
ABL-CD3-98A	98	211	324	442	555	671	899	1126
ABL-CD3-99A	99	212	325	443	556	672	900	1127
ABL-CD3-100A	100	213	326	444	557	673	901	1128
ABL-CD3-101A	101	214	327	445	558	674	902	1129
ABL-CD3-102A	102	215	328	446	559	675	903	1130
ABL-CD3-103A	103	216	329	447	560	676	904	1131
ABL-CD3-104A	104	217	330	448	561	677	905	1132
ABL-CD3-105A	105	218	331	449	562	678	906	1133

Antibody	LCDR1	LCDR2	LCDR3	HCDR1	HCDR2	HCDR3	VL	VH
ABL-CD3-106A	106	219	332	450	563	679	907	1134
ABL-CD3-107A	107	220	333	451	564	680	908	1135
ABL-CD3-108A	108	221	334	452	565	681	909	1136
ABL-CD3-109A	109	222	335	453	566	682	910	1137
ABL-CD3-110A	110	223	336	454	567	683	911	1138
ABL-CD3-111A	111	224	337	455	568	684	912	1139
ABL-CD3-112A	112	225	338	456	569	685	913	1140
ABL-CD3-113A	113	226	339	457	570	686	914	1141

Table 1B. LCDR Sequences

SEQ ID NO:	Antibody	Sequence
Light Chain CDR1 Sequences		
1	ABL-CD3-1/ABL-CD3-1A	TRSSGSIASNYVQ
2	ABL-CD3-2/ABL-CD3-2A	SGDKLGNKYAC
3	ABL-CD3-3/ABL-CD3-3A	SGDKLRDKYAC
4	ABL-CD3-4/ABL-CD3-4A	SGDKLGDKYAG
5	ABL-CD3-5/ABL-CD3-5A	TRSSGSIASNYVQ
6	ABL-CD3-6/ABL-CD3-6A	SGDALPKKYAY
7	ABL-CD3-7/ABL-CD3-7A	TRSSGSIASNYVQ
8	ABL-CD3-8/ABL-CD3-8A	SGDALPKKYAY
9	ABL-CD3-9/ABL-CD3-9A	SGDALPKKYAY
10	ABL-CD3-10/ABL-CD3-10A	TRSSGSIASNYVQ
11	ABL-CD3-11/ABL-CD3-11A	TRSSGSIASNYVQ
12	ABL-CD3-12/ABL-CD3-12A	TRSNGSITSNYVQ
13	ABL-CD3-13/ABL-CD3-13A	RASQSISNWLA
14	ABL-CD3-14/ABL-CD3-14A	TRSSGSIASNYVQ
15	ABL-CD3-15/ABL-CD3-15A	TRSSGSIASNYVQ
16	ABL-CD3-16/ABL-CD3-16A	RASQSIGSWLA
17	ABL-CD3-17/ABL-CD3-17A	TRSSGSIASKYVQ
18	ABL-CD3-18/ABL-CD3-18A	RSSQSLVHSDGNTYLN
19	ABL-CD3-19/ABL-CD3-19A	TRSSGSIASNYVQ
20	ABL-CD3-20/ABL-CD3-20A	TRSSGSIASNYVQ
21	ABL-CD3-21/ ABL-CD3-21A	SGDALPKKYAY
22	ABL-CD3-22/ABL-CD3-22A	SGDALPKQYTY
23	ABL-CD3-23/ABL-CD3-23A	TRSSGSIASNYVQ
24	ABL-CD3-24/ABL-CD3-24A	TRSSGSIASNYVQ
25	ABL-CD3-25/ABL-CD3-25A	TRSSGSIASNYVQ
26	ABL-CD3-26/ABL-CD3-26A	TRSSGSIASNYVQ
27	ABL-CD3-27/ABL-CD3-27A	GLNSGSVSTSYYPS
28	ABL-CD3-28/ABL-CD3-28A	TRSSGSIASNYVQ
29	ABL-CD3-29/ABL-CD3-29A	SGSSSNIGSNYVY
30	ABL-CD3-30/ABL-CD3-30A	TRSSGSIASNYVQ
31	ABL-CD3-31/ABL-CD3-31A	RSSQSLLHSNGYNYLD
32	ABL-CD3-32/ABL-CD3-32A	SGDKLGYKYAS
33	ABL-CD3-33/ABL-CD3-33A	TRSSGSIASNYVQ
34	ABL-CD3-34/ABL-CD3-34A	TRSSGSIASNYVQ
35	ABL-CD3-35/ABL-CD3-35A	SGDALPKKYAY

36	ABL-CD3-36/ABL-CD3-36A	RASQSISSWLA
37	ABL-CD3-37/ABL-CD3-37A	RASQSISSWLA
38	ABL-CD3-38/ABL-CD3-38A	TGSSSNIGAGYDVH
39	ABL-CD3-39/ABL-CD3-39A	RSSQSLVYSDGNTYLT
40	ABL-CD3-40/ABL-CD3-40A	SGSSSNIGSNTVN
41	ABL-CD3-41/ABL-CD3-41A	SGDALPKKYAY
42	ABL-CD3-42/ABL-CD3-42A	SGDALPKQYTY
43	ABL-CD3-43/ABL-CD3-43A	TGTSSDVGSYNLVS
44	ABL-CD3-44/ABL-CD3-44A	MLSSGFSVGDFWIR
45	ABL-CD3-45/ABL-CD3-45A	RASQSISSWLA
46	ABL-CD3-46/ABL-CD3-46A	TRSSGSIASNYVQ
47	ABL-CD3-47/ABL-CD3-47A	TRSSGSIASKYVQ
48	ABL-CD3-48/ABL-CD3-48A	TRSSGSIASNYVQ
49	ABL-CD3-49/ABL-CD3-49A	TRSSGSIASNYVQ
50	ABL-CD3-50/ABL-CD3-50A	TRSSGSIASNYVQ
51	ABL-CD3-51/ABL-CD3-51A	TRSSGSIASNYVQ
52	ABL-CD3-52/ABL-CD3-52A	SGDALPKKYAY
53	ABL-CD3-53/ABL-CD3-53A	TRSSGSIASNYVQ
54	ABL-CD3-54/ABL-CD3-54A	TRSSGSIASYYVQ
55	ABL-CD3-55/ABL-CD3-55A	TRSSGSIASNYVQ
56	ABL-CD3-56/ABL-CD3-56A	TRSSGSIASNYVQ
57	ABL-CD3-57/ABL-CD3-57A	MLSSGFSVGDFWIR
58	ABL-CD3-58/ABL-CD3-58A	TRSSGSIASNFVQ
59	ABL-CD3-59/ABL-CD3-59A	TRSSGSIASNYVQ
60	ABL-CD3-60/ABL-CD3-60A	TRSSGSIASNYVQ
61	ABL-CD3-61/ABL-CD3-61A	ASSTGAVTSGYYPN
62	ABL-CD3-62/ABL-CD3-62A	TRSSGSIASNYVQ
63	ABL-CD3-63/ABL-CD3-63A	TRTSGSIASNYVQ
64	ABL-CD3-64/ABL-CD3-64A	TRSSGSIASNYVQ
65	ABL-CD3-65/ABL-CD3-65A	SGSSSNIGSNYVY
66	ABL-CD3-66/ABL-CD3-66A	TRSSGSIASNYVQ
67	ABL-CD3-67/ABL-CD3-67A	TRSSGSIASNYVQ
68	ABL-CD3-68/ABL-CD3-68A	SGDALPKQYAY
69	ABL-CD3-69/ABL-CD3-69A	TRSSGSIASNYVQ
70	ABL-CD3-70/ABL-CD3-70A	TRSSGSIASNYVQ
71	ABL-CD3-71/ABL-CD3-71A	TRSSGSIASNYVQ
72	ABL-CD3-72/ABL-CD3-72A	TRSSGSIASNYVQ
73	ABL-CD3-73/ABL-CD3-73A	TRSSGSIASNYVQ
74	ABL-CD3-74/ABL-CD3-74A	SGDALPKKYAY
75	ABL-CD3-75/ABL-CD3-75A	SGDALPKKYAY
76	ABL-CD3-76/ABL-CD3-76A	SGDALPKKYAY
77	ABL-CD3-77/ABL-CD3-77A	TGSSSNIGAGYDVH
78	ABL-CD3-78/ABL-CD3-78A	TRSSGSIASNYVQ
79	ABL-CD3-79/ABL-CD3-79A	GLSSGSVSTSYYPS
80	ABL-CD3-80/ABL-CD3-80A	SGDALPKKYAY
81	ABL-CD3-81/ABL-CD3-81A	TRSSGSIASNYVQ
82	ABL-CD3-82/ABL-CD3-82A	SGDALPKKYAY
83	ABL-CD3-83/ABL-CD3-83A	TRSSGSIASNYVQ

84	ABL-CD3-84/ABL-CD3-84A	TRSSGSIASNYVQ
85	ABL-CD3-85/ABL-CD3-85A	TRSSGSIASNYVQ
86	ABL-CD3-86/ABL-CD3-86A	TRNSGSIASNYVQ
87	ABL-CD3-87/ABL-CD3-87A	TRSSGSIASNYVQ
88	ABL-CD3-88/ABL-CD3-88A	RASQSISSWLA
89	ABL-CD3-89/ABL-CD3-89A	RASQSVSSSYLA
90	ABL-CD3-90/ABL-CD3-90A	TRSSGSIASNYVQ
91	ABL-CD3-91/ABL-CD3-91A	TRSSGSIASNYVQ
92	ABL-CD3-92/ABL-CD3-92A	SGDKLGNKYAC
93	ABL-CD3-93/ABL-CD3-93A	TRSSGSIASNYVQ
94	ABL-CD3-94/ABL-CD3-94A	TRSSGSIASNYVQ
95	ABL-CD3-95/ABL-CD3-95A	TRSSGSIASNYVQ
96	ABL-CD3-96/ABL-CD3-96A	TRSSGSIASNYVQ
97	ABL-CD3-97/ABL-CD3-97A	SGDKLGDKYAC
98	ABL-CD3-98/ABL-CD3-98A	TRSSGSIASNYVQ
99	ABL-CD3-99/ABL-CD3-99A	TRSSGSIASNYVQ
100	ABL-CD3-100/ABL-CD3-100A	SGDKLGNKYAC
101	ABL-CD3-101/ABL-CD3-101A	TRSSGSIASNYVQ
102	ABL-CD3-102/ABL-CD3-102A	TRSSGSIASNYVQ
103	ABL-CD3-103/ABL-CD3-103A	TRSSGSIASNYVQ
104	ABL-CD3-104/ABL-CD3-104A	TRSSGSIASNYVQ
105	ABL-CD3-105/ABL-CD3-105A	TRSSGSIASNYVQ
106	ABL-CD3-106/ABL-CD3-106A	TRSSGSIASNYVQ
107	ABL-CD3-107/ABL-CD3-107A	SGSSSNIGSNTVN
108	ABL-CD3-108/ABL-CD3-108A	TRSSGSIASNYVQ
109	ABL-CD3-109/ABL-CD3-109A	TRSSGSIASNYVQ
110	ABL-CD3-110/ABL-CD3-110A	TRSSGSIASNYVQ
111	ABL-CD3-111/ABL-CD3-111A	RASQSVSSSYLA
112	ABL-CD3-112/ABL-CD3-112A	GLSSGSVSTSYYPS
113	ABL-CD3-113/ABL-CD3-113A	GLSSGSVSTSYYPS
Light Chain CDR2 Sequences		
114	ABL-CD3-1/ABL-CD3-1A	EDNQRPS
115	ABL-CD3-2/ABL-CD3-2A	QDSKRPS
116	ABL-CD3-3/ABL-CD3-3A	QDSKRPS
117	ABL-CD3-4/ABL-CD3-4A	QDSKRPS
118	ABL-CD3-5/ABL-CD3-5A	EDNQRPS
119	ABL-CD3-6/ABL-CD3-6A	EDSKRPS
120	ABL-CD3-7/ABL-CD3-7A	EDNQRPS
121	ABL-CD3-8/ABL-CD3-8A	EDSKRPS
122	ABL-CD3-9/ABL-CD3-9A	EDSKRPS
123	ABL-CD3-10/ABL-CD3-10A	EDNQRPS
124	ABL-CD3-11/ABL-CD3-11A	EDNQRPS
125	ABL-CD3-12/ABL-CD3-12A	EDNQRPS
126	ABL-CD3-13/ABL-CD3-13A	KASSLES
127	ABL-CD3-14/ABL-CD3-14A	EDNQRPS
128	ABL-CD3-15/ABL-CD3-15A	EDNQRPS
129	ABL-CD3-16/ABL-CD3-16A	KASSLES
130	ABL-CD3-17/ABL-CD3-17A	EDNQRPS

131	ABL-CD3-18/ABL-CD3-18A	KISDRFS
132	ABL-CD3-19/ABL-CD3-19A	EDNQRPS
133	ABL-CD3-20/ABL-CD3-20A	EDNQRPS
134	ABL-CD3-21/ ABL-CD3-21A	EDSKRPS
135	ABL-CD3-22/ABL-CD3-22A	KDSERPS
136	ABL-CD3-23/ABL-CD3-23A	EDNHRPS
137	ABL-CD3-24/ABL-CD3-24A	EDNQRPS
138	ABL-CD3-25/ABL-CD3-25A	EDNHRPS
139	ABL-CD3-26/ABL-CD3-26A	EDNHRPS
140	ABL-CD3-27/ABL-CD3-27A	STNTRSS
141	ABL-CD3-28/ABL-CD3-28A	EDNQRPS
142	ABL-CD3-29/ABL-CD3-29A	SNNQRPS
143	ABL-CD3-30/ABL-CD3-30A	EDDQRPS
144	ABL-CD3-31/ABL-CD3-31A	LGSNRAS
145	ABL-CD3-32/ABL-CD3-32A	QDSKRPS
146	ABL-CD3-33/ABL-CD3-33A	EDNQRPS
147	ABL-CD3-34/ABL-CD3-34A	EDNQRPS
148	ABL-CD3-35/ABL-CD3-35A	EDSKRPS
149	ABL-CD3-36/ABL-CD3-36A	KASSLES
150	ABL-CD3-37/ABL-CD3-37A	KASSLES
151	ABL-CD3-38/ABL-CD3-38A	GNSNRPS
152	ABL-CD3-39/ABL-CD3-39A	KVSNRDS
153	ABL-CD3-40/ABL-CD3-40A	SNNQRPS
154	ABL-CD3-41/ABL-CD3-41A	EDSKRPS
155	ABL-CD3-42/ABL-CD3-42A	KDSERPS
156	ABL-CD3-43/ABL-CD3-43A	EDIRRPS
157	ABL-CD3-44/ABL-CD3-44A	YHSDSNK
158	ABL-CD3-45/ABL-CD3-45A	KASSLES
159	ABL-CD3-46/ABL-CD3-46A	EDNQRPS
160	ABL-CD3-47/ABL-CD3-47A	EDNQRPS
161	ABL-CD3-48/ABL-CD3-48A	EDNQRPS
162	ABL-CD3-49/ABL-CD3-49A	EDNQRSS
163	ABL-CD3-50/ABL-CD3-50A	EDNQRPS
164	ABL-CD3-51/ABL-CD3-51A	EDNQRPS
165	ABL-CD3-52/ABL-CD3-52A	EDSKRPS
166	ABL-CD3-53/ABL-CD3-53A	EDNQRPS
167	ABL-CD3-54/ABL-CD3-54A	EDNQRPS
168	ABL-CD3-55/ABL-CD3-55A	EDNQRPS
169	ABL-CD3-56/ABL-CD3-56A	EDNQRPS
170	ABL-CD3-57/ABL-CD3-57A	YHSDSNK
171	ABL-CD3-58/ABL-CD3-58A	EDNQRPS
172	ABL-CD3-59/ABL-CD3-59A	EDNQRPS
173	ABL-CD3-60/ABL-CD3-60A	EDNQRPS
174	ABL-CD3-61/ABL-CD3-61A	STSNKHS
175	ABL-CD3-62/ABL-CD3-62A	EDNQRPS
176	ABL-CD3-63/ABL-CD3-63A	EDNQRPS
177	ABL-CD3-64/ABL-CD3-64A	EDNQRPS
178	ABL-CD3-65/ABL-CD3-65A	SNNQRPS

179	ABL-CD3-66/ABL-CD3-66A	EDNQRPS
180	ABL-CD3-67/ABL-CD3-67A	EDNQRPS
181	ABL-CD3-68/ABL-CD3-68A	KDSERPS
182	ABL-CD3-69/ABL-CD3-69A	EDNQRPS
183	ABL-CD3-70/ABL-CD3-70A	EDNQRPS
184	ABL-CD3-71/ABL-CD3-71A	EDNQRPS
185	ABL-CD3-72/ABL-CD3-72A	EDNQRPS
186	ABL-CD3-73/ABL-CD3-73A	EDNRRPS
187	ABL-CD3-74/ABL-CD3-74A	EDSKRPS
188	ABL-CD3-75/ABL-CD3-75A	EDSKRPS
189	ABL-CD3-76/ABL-CD3-76A	EDSKRPS
190	ABL-CD3-77/ABL-CD3-77A	GNSNRPS
191	ABL-CD3-78/ABL-CD3-78A	EDNQRPS
192	ABL-CD3-79/ABL-CD3-79A	STNTRSS
193	ABL-CD3-80/ABL-CD3-80A	EDSKRPS
194	ABL-CD3-81/ABL-CD3-81A	EDNQRPS
195	ABL-CD3-82/ABL-CD3-82A	EDSKRPS
196	ABL-CD3-83/ABL-CD3-83A	EDNQRPS
197	ABL-CD3-84/ABL-CD3-84A	EDTQRPS
198	ABL-CD3-85/ABL-CD3-85A	EDNHRPS
199	ABL-CD3-86/ABL-CD3-86A	EDKQRPS
200	ABL-CD3-87/ABL-CD3-87A	EDNQRPS
201	ABL-CD3-88/ABL-CD3-88A	KASSLES
202	ABL-CD3-89/ABL-CD3-89A	GASSRAT
203	ABL-CD3-90/ABL-CD3-90A	EDNQRPS
204	ABL-CD3-91/ABL-CD3-91A	EDNQRPS
205	ABL-CD3-92/ABL-CD3-92A	QDNKRPS
206	ABL-CD3-93/ABL-CD3-93A	EDNQRPS
207	ABL-CD3-94/ABL-CD3-94A	EDNQRPS
208	ABL-CD3-95/ABL-CD3-95A	EDNQRPS
209	ABL-CD3-96/ABL-CD3-96A	EDNQRPS
210	ABL-CD3-97/ABL-CD3-97A	QDSKRPS
211	ABL-CD3-98/ABL-CD3-98A	EDNQRPS
212	ABL-CD3-99/ABL-CD3-99A	EDNQRPS
213	ABL-CD3-100/ABL-CD3-100A	QDSKRPS
214	ABL-CD3-101/ABL-CD3-101A	EDNQRPS
215	ABL-CD3-102/ABL-CD3-102A	EDNQRPS
216	ABL-CD3-103/ABL-CD3-103A	EDNQRPS
217	ABL-CD3-104/ABL-CD3-104A	EDNQRPS
218	ABL-CD3-105/ABL-CD3-105A	EDNQRPS
219	ABL-CD3-106/ABL-CD3-106A	EDNQRPS
220	ABL-CD3-107/ABL-CD3-107A	SNNQRPS
221	ABL-CD3-108/ABL-CD3-108A	EDNQRPS
222	ABL-CD3-109/ABL-CD3-109A	EDNQRPS
223	ABL-CD3-110/ABL-CD3-110A	EDNQRPS
224	ABL-CD3-111/ABL-CD3-111A	GASSRAT
225	ABL-CD3-112/ABL-CD3-112A	STNTHSS
226	ABL-CD3-113/ABL-CD3-113A	STNTHSS

Light Chain CDR3 Sequences		
227	ABL-CD3-1/ABL-CD3-1A	QSYDSSNRV
228	ABL-CD3-2/ABL-CD3-2A	QAWDISTVV
229	ABL-CD3-3/ABL-CD3-3A	QAWDSSTVV
230	ABL-CD3-4/ABL-CD3-4A	QAWDSSTVV
231	ABL-CD3-5/ABL-CD3-5A	QSYDSSNHV
232	ABL-CD3-6/ABL-CD3-6A	YSTDSSGNHSWV
233	ABL-CD3-7/ABL-CD3-7A	QSFDNSNRV
234	ABL-CD3-8/ABL-CD3-8A	YSTDSSGNHSWV
235	ABL-CD3-9/ABL-CD3-9A	YSTDSSGNHCWV
236	ABL-CD3-10/ABL-CD3-10A	QSLDSSSVV
237	ABL-CD3-11/ABL-CD3-11A	QSYDSSNQV
238	ABL-CD3-12/ABL-CD3-12A	QSFDNSNRV
239	ABL-CD3-13/ABL-CD3-13A	QQYKSYSWT
240	ABL-CD3-14/ABL-CD3-14A	QSYDSSNRV
241	ABL-CD3-15/ABL-CD3-15A	QSYDSSNRV
242	ABL-CD3-16/ABL-CD3-16A	QQYNSYSWT
243	ABL-CD3-17/ABL-CD3-17A	QSYDSNNRV
244	ABL-CD3-18/ABL-CD3-18A	MQSTQFPIT
245	ABL-CD3-19/ABL-CD3-19A	QSFDNSNRV
246	ABL-CD3-20/ABL-CD3-20A	QSYDRSNRV
247	ABL-CD3-21/ ABL-CD3-21A	YSTHSSGNHRV
248	ABL-CD3-22/ABL-CD3-22A	QSADSSGTYRV
249	ABL-CD3-23/ABL-CD3-23A	QSFDSSNRV
250	ABL-CD3-24/ABL-CD3-24A	QSFYSSNRV
251	ABL-CD3-25/ABL-CD3-25A	QSFDSSNRV
252	ABL-CD3-26/ABL-CD3-26A	QSFDSSNRV
253	ABL-CD3-27/ABL-CD3-27A	VLYMGSGIWV
254	ABL-CD3-28/ABL-CD3-28A	QSFDSSNVV
255	ABL-CD3-29/ABL-CD3-29A	EAWDDSLSGPV
256	ABL-CD3-30/ABL-CD3-30A	QSYNSSNQV
257	ABL-CD3-31/ABL-CD3-31A	MQPLQTPYT
258	ABL-CD3-32/ABL-CD3-32A	QAWDSSTVV
259	ABL-CD3-33/ABL-CD3-33A	QSYYNSNRV
260	ABL-CD3-34/ABL-CD3-34A	QSYDSSNRV
261	ABL-CD3-35/ABL-CD3-35A	YSTDSSGNHCWV
262	ABL-CD3-36/ABL-CD3-36A	QQYISYSWT
263	ABL-CD3-37/ABL-CD3-37A	QQYNSYWT
264	ABL-CD3-38/ABL-CD3-38A	QSYDSSLSGYV
265	ABL-CD3-39/ABL-CD3-39A	MQGTHWPLT
266	ABL-CD3-40/ABL-CD3-40A	APWDDSLNGVV
267	ABL-CD3-41	YSTDSSGNHCWV
268	ABL-CD3-42/ABL-CD3-42A	QSADSSGTYRV
269	ABL-CD3-43	CSYAGSTTFAI
270	ABL-CD3-44/ABL-CD3-44A	GTWHSNSKTWV
271	ABL-CD3-45/ABL-CD3-45A	QQYKSYSWT
272	ABL-CD3-46/ABL-CD3-46A	YDRSNRV
273	ABL-CD3-47/ABL-CD3-47A	QSYYSNNRV

274	ABL-CD3-48/ABL-CD3-48A	QSFDSSNRV
275	ABL-CD3-49	QCYDRSNRV
276	ABL-CD3-50/ABL-CD3-50A	QSFDTSNVV
277	ABL-CD3-51/ABL-CD3-51A	QSYDSSNRV
278	ABL-CD3-52/ABL-CD3-52A	YSTDSSGNHRV
279	ABL-CD3-53/ABL-CD3-53A	QSYDSSNRV
280	ABL-CD3-54/ABL-CD3-54A	QSFDSSNRV
281	ABL-CD3-55/ABL-CD3-55A	QSYDSSNRV
282	ABL-CD3-56/ABL-CD3-56A	QSYDSSNRV
283	ABL-CD3-57/ABL-CD3-57A	GTWHSNSKTQV
284	ABL-CD3-58/ABL-CD3-58A	QSFDSSNRV
285	ABL-CD3-59/ABL-CD3-59A	QSYDNSIRV
286	ABL-CD3-60/ABL-CD3-60A	QSYDSSNRV
287	ABL-CD3-61/ABL-CD3-61A	LLYYGGAYV
288	ABL-CD3-62/ABL-CD3-62A	QSYDSSNRV
289	ABL-CD3-63/ABL-CD3-63A	QSYDRSNRV
290	ABL-CD3-64/ABL-CD3-64A	QSYDSSNRV
291	ABL-CD3-65/ABL-CD3-65A	AAWDDSLSGVV
292	ABL-CD3-66/ABL-CD3-66A	QSYDRSNRV
293	ABL-CD3-67/ABL-CD3-67A	QSYDSSNRV
294	ABL-CD3-68/ABL-CD3-68A	QSADSSGTYVV
295	ABL-CD3-69/ABL-CD3-69A	QSYDSSNRV
296	ABL-CD3-70/ABL-CD3-70A	QSYDSSNRV
297	ABL-CD3-71/ABL-CD3-71A	QSYDRSNRV
298	ABL-CD3-72/ABL-CD3-72A	QSYDSSNRV
299	ABL-CD3-73/ABL-CD3-73A	QSYDNSNRV
300	ABL-CD3-74/ABL-CD3-74A	YSTDSSGNHWV
301	ABL-CD3-75/ABL-CD3-75A	YSTDSSGNHNWV
302	ABL-CD3-76/ABL-CD3-76A	YSTDSSGNHWV
303	ABL-CD3-77/ABL-CD3-77A	QSYDSSLSGSV
304	ABL-CD3-78/ABL-CD3-78A	QSFDGSNRV
305	ABL-CD3-79/ABL-CD3-79A	VLYMGSGIWV
306	ABL-CD3-80/ABL-CD3-80A	YSTDSSGNHSWV
307	ABL-CD3-81/ABL-CD3-81A	QSFDSSNRV
308	ABL-CD3-82/ABL-CD3-82A	YSTDSSGNHSWV
309	ABL-CD3-83/ABL-CD3-83A	QSSDRSNVV
310	ABL-CD3-84/ABL-CD3-84A	QSYDSSNRV
311	ABL-CD3-85	QSCDSSNVV
312	ABL-CD3-86/ABL-CD3-86A	QSCDSSNVV
313	ABL-CD3-87/ABL-CD3-87A	QSYDSSNRV
314	ABL-CD3-88/ABL-CD3-88A	QQYNSYSWT
315	ABL-CD3-89/ABL-CD3-89A	QQYGSSRWS
316	ABL-CD3-90/ABL-CD3-90A	QSYDSSNQV
317	ABL-CD3-91/ABL-CD3-91A	QSYDSSNQV
318	ABL-CD3-92/ABL-CD3-92A	QAWDSTTAV
319	ABL-CD3-93/ABL-CD3-93A	QSYDSSNQV
320	ABL-CD3-94/ABL-CD3-94A	QSYDSSIRV
321	ABL-CD3-95/ABL-CD3-95A	QSYDSSNQV

322	ABL-CD3-96/ABL-CD3-96A	QSYDSSNVV
323	ABL-CD3-97/ABL-CD3-97A	QAWDSTTAV
324	ABL-CD3-98/ABL-CD3-98A	QSYDNNNRV
325	ABL-CD3-99/ABL-CD3-99A	QSYDSSIRV
326	ABL-CD3-100/ABL-CD3-100A	QAWDSITAV
327	ABL-CD3-101/ABL-CD3-101A	QSYDSSNQV
328	ABL-CD3-102/ABL-CD3-102A	QSYDRSIRV
329	ABL-CD3-103/ABL-CD3-103A	QSYDSSNVV
330	ABL-CD3-104/ABL-CD3-104A	QSYDSSNVV
331	ABL-CD3-105/ABL-CD3-105A	QSYDSSNQV
332	ABL-CD3-106/ABL-CD3-106A	QSYDGSIRV
333	ABL-CD3-107/ABL-CD3-107A	AAWDDSLNGRVV
334	ABL-CD3-108/ABL-CD3-108A	QSYDSSNVV
335	ABL-CD3-109/ABL-CD3-109A	QSYDSSNQV
336	ABL-CD3-110/ABL-CD3-110A	QSYDGSNRV
337	ABL-CD3-111/ABL-CD3-111A	QQYGSSPFT
338	ABL-CD3-112/ABL-CD3-112A	VLYMGSGIWV
339	ABL-CD3-113/ABL-CD3-113A	VLYMGSGIWV
340	ABL-CD3-41A	YSTDSSGNHSWV
341	ABL-CD3-43A	SSYAGSTTFAI
342	ABL-CD3-49A	QSYDRSNRV
343	ABL-CD3-85A	QSYDSSNVV
344	ABL-CD3-85B	QSSDSSNVV

Table 1C. HCDR Sequences

SEQ ID NO:	Name	Sequence
Heavy Chain CDR1 Sequences		
345	ABL-CD3-1/ABL-CD3-1A	SYSMN
346	ABL-CD3-2/ABL-CD3-2A	SYSMN
347	ABL-CD3-3/ABL-CD3-3A	SYSMN
348	ABL-CD3-4/ABL-CD3-4A	SYNMN
349	ABL-CD3-5/ABL-CD3-5A	RYSMN
350	ABL-CD3-6/ABL-CD3-6A	SYSMN
351	ABL-CD3-7/ABL-CD3-7A	RYSMN
352	ABL-CD3-8/ABL-CD3-8A	SYSMN
353	ABL-CD3-9/ABL-CD3-9A	SYSMN
354	ABL-CD3-10/ABL-CD3-10A	CNSVA
355	ABL-CD3-11/ABL-CD3-11A	TFGMGVG
356	ABL-CD3-12/ABL-CD3-12A	SYTMN
357	ABL-CD3-13/ABL-CD3-13A	NYWMS
358	ABL-CD3-14/ABL-CD3-14A	SYSMT
359	ABL-CD3-15/ABL-CD3-15A	SYSMN
360	ABL-CD3-16/ABL-CD3-16A	RYWMT
361	ABL-CD3-17/ABL-CD3-17A	RYSIN
362	ABL-CD3-18/ABL-CD3-18A	SYAMH
363	ABL-CD3-19/ABL-CD3-19A	SYSMN
364	ABL-CD3-20/ABL-CD3-20A	TYSMN

365	ABL-CD3-21/ ABL-CD3-21A	SYSMN
366	ABL-CD3-22/ABL-CD3-22A	SYSMN
367	ABL-CD3-23/ABL-CD3-23A	SYSMN
368	ABL-CD3-24/ABL-CD3-24A	SYTMN
369	ABL-CD3-25/ABL-CD3-25A	SYSMN
370	ABL-CD3-26/ABL-CD3-26A	SYSMN
371	ABL-CD3-27/ABL-CD3-27A	SYYMH
372	ABL-CD3-28/ABL-CD3-28A	SNSVA
373	ABL-CD3-29/ABL-CD3-29A	SYWIA
374	ABL-CD3-30/ABL-CD3-30A	SYYWS
375	ABL-CD3-31/ABL-CD3-31A	NYWIG
376	ABL-CD3-32/ABL-CD3-32A	SYNMN
377	ABL-CD3-33/ABL-CD3-33A	SYSMN
378	ABL-CD3-34/ABL-CD3-34A	RYSMN
379	ABL-CD3-35/ABL-CD3-35A	SYSMN
380	ABL-CD3-36/ABL-CD3-36A	NYWMS
381	ABL-CD3-37/ABL-CD3-37A	SYSMN
382	ABL-CD3-38/ABL-CD3-38A	GYYWS
383	ABL-CD3-39/ABL-CD3-39A	YYAMS
384	ABL-CD3-40/ABL-CD3-40A	YYAMS
385	ABL-CD3-41/ABL-CD3-41A	SYSMN
386	ABL-CD3-42/ABL-CD3-42A	SYSIN
387	ABL-CD3-43/ABL-CD3-43A	TYWIA
388	ABL-CD3-44/ABL-CD3-44A	TYWMS
389	ABL-CD3-45/ABL-CD3-45A	SYWMS
390	ABL-CD3-46/ABL-CD3-46A	TYTMN
391	ABL-CD3-47/ABL-CD3-47A	RYSMN
392	ABL-CD3-48/ABL-CD3-48A	SYTMN
393	ABL-CD3-49/ABL-CD3-49A	TYTMN
394	ABL-CD3-50/ABL-CD3-50A	SNSVA
395	ABL-CD3-51/ABL-CD3-51A	SYSMN
396	ABL-CD3-52/ABL-CD3-52A	YYSMN
397	ABL-CD3-53/ABL-CD3-53A	SYTMN
398	ABL-CD3-54/ABL-CD3-54A	SYSMN
399	ABL-CD3-55/ABL-CD3-55A	IYSMN
400	ABL-CD3-56/ABL-CD3-56A	RYSMN
401	ABL-CD3-57/ABL-CD3-57A	SYTMN
402	ABL-CD3-58/ABL-CD3-58A	NYNMN
403	ABL-CD3-59/ABL-CD3-59A	SYSMN
404	ABL-CD3-60/ABL-CD3-60A	IYSMN
405	ABL-CD3-61/ABL-CD3-61A	SYSMN
406	ABL-CD3-62/ABL-CD3-62A	SYSMN
407	ABL-CD3-63/ABL-CD3-63A	SYYWS
408	ABL-CD3-64/ABL-CD3-64A	RYSMN
409	ABL-CD3-65/ABL-CD3-65A	GYYWS
410	ABL-CD3-66/ABL-CD3-66A	SYYWS
411	ABL-CD3-67/ABL-CD3-67A	SYSMN
412	ABL-CD3-68/ABL-CD3-68A	SSIMN

413	ABL-CD3-69/ABL-CD3-69A	TYTMN
414	ABL-CD3-70/ABL-CD3-70A	TYIMN
415	ABL-CD3-71/ABL-CD3-71A	SYYWS
416	ABL-CD3-72/ABL-CD3-72A	TYIMN
417	ABL-CD3-73/ABL-CD3-73A	SYSMN
418	ABL-CD3-74/ABL-CD3-74A	SYSMK
419	ABL-CD3-75/ABL-CD3-75A	TYSLN
420	ABL-CD3-76/ABL-CD3-76A	NYYMN
421	ABL-CD3-77/ABL-CD3-77A	SYSMN
422	ABL-CD3-78/ABL-CD3-78A	NYSMN
423	ABL-CD3-79/ABL-CD3-79A	NYSMN
424	ABL-CD3-80/ABL-CD3-80A	GYSMN
425	ABL-CD3-81/ABL-CD3-81A	SGGYY
426	ABL-CD3-82/ABL-CD3-82A	SYSMN
427	ABL-CD3-83/ABL-CD3-83A	SYSMN
428	ABL-CD3-84/ABL-CD3-84A	NFIMN
429	ABL-CD3-85/ABL-CD3-85A	SYSMN
430	ABL-CD3-86/ABL-CD3-86A	RYSMN
431	ABL-CD3-87/ABL-CD3-87A	RYSMN
432	ABL-CD3-88/ABL-CD3-88A	RYWMS
433	ABL-CD3-89/ABL-CD3-89A	SYWMS
434	ABL-CD3-90/ABL-CD3-90A	SYSMN
435	ABL-CD3-91/ABL-CD3-91A	YYSMN
436	ABL-CD3-92/ABL-CD3-92A	SYSMN
437	ABL-CD3-93/ABL-CD3-93A	RYSMN
438	ABL-CD3-94/ABL-CD3-94A	SYSMN
439	ABL-CD3-95/ABL-CD3-95A	RYSMN
440	ABL-CD3-96/ABL-CD3-96A	RYSMN
441	ABL-CD3-97/ABL-CD3-97A	SYSMN
442	ABL-CD3-98/ABL-CD3-98A	SYSMN
443	ABL-CD3-99/ABL-CD3-99A	SYSMN
444	ABL-CD3-100/ABL-CD3-100A	SYSMN
445	ABL-CD3-101/ABL-CD3-101A	RYSMN
446	ABL-CD3-102/ABL-CD3-102A	SYSMN
447	ABL-CD3-103/ABL-CD3-103A	RYSMN
448	ABL-CD3-104/ABL-CD3-104A	RYSMN
449	ABL-CD3-105/ABL-CD3-105A	RYSMN
450	ABL-CD3-106/ABL-CD3-106A	SYSMN
451	ABL-CD3-107/ABL-CD3-107A	TYWIA
452	ABL-CD3-108/ABL-CD3-108A	RYSMN
453	ABL-CD3-109/ABL-CD3-109A	SYSMN
454	ABL-CD3-110/ABL-CD3-110A	SYSMN
455	ABL-CD3-111/ABL-CD3-111A	SYSMN
456	ABL-CD3-112/ABL-CD3-112A	SYSMN
457	ABL-CD3-113/ABL-CD3-113A	SYSMN
Heavy Chain CDR2 Sequences		
458	ABL-CD3-1/ABL-CD3-1A	SISRSGSYIYYADSVKG
459	ABL-CD3-2/ABL-CD3-2A	SISRSTSYIYYADSVKG

460	ABL-CD3-3/ABL-CD3-3A	YISRSSNYIHYADSVKG
461	ABL-CD3-4/ABL-CD3-4A	SISSSSSYIYYADSVKG
462	ABL-CD3-5/ABL-CD3-5A	YISSSSSSIYYADSVKG
463	ABL-CD3-6/ABL-CD3-6A	SISSRGSYRNYADSVKG
464	ABL-CD3-7/ABL-CD3-7A	SISSSGSYKYYADSVKG
465	ABL-CD3-8/ABL-CD3-8A	SISSSSSYIYYADSVKG
466	ABL-CD3-9/ABL-CD3-9A	SVNSRGSYIYYADSVKG
467	ABL-CD3-10/ABL-CD3-10A	LGRTYYRSKWHNEYAVSVK
468	ABL-CD3-11/ABL-CD3-11A	HIWWDDDKYYNPALKS
469	ABL-CD3-12/ABL-CD3-12A	SISRSSSYKYYADSVKG
470	ABL-CD3-13/ABL-CD3-13A	NIKEDGSEKYYVDSVKG
471	ABL-CD3-14/ABL-CD3-14A	SISRRSSYIYYADSVKG
472	ABL-CD3-15/ABL-CD3-15A	SISRSSNYIYYADSVKG
473	ABL-CD3-16/ABL-CD3-16A	NIKEDGSEKYCVDSVKG
474	ABL-CD3-17/ABL-CD3-17A	YISSSSSTIYYADSVKG
475	ABL-CD3-18/ABL-CD3-18A	AISSNGGRTYYADSVKG
476	ABL-CD3-19/ABL-CD3-19A	SISRSSSYIYYADSVKG
477	ABL-CD3-20/ABL-CD3-20A	SISSSGSYVYYADSVKG
478	ABL-CD3-21/ ABL-CD3-21A	SISRSSSYIYYADSVKG
479	ABL-CD3-22/ABL-CD3-22A	YISSSSSTIYYADSVKG
480	ABL-CD3-23/ABL-CD3-23A	SISSSSTYIYYADSVKG
481	ABL-CD3-24/ABL-CD3-24A	SISRSGSYKYNADSVKG
482	ABL-CD3-25/ABL-CD3-25A	SISSSSTYIYYADSVKG
483	ABL-CD3-26/ABL-CD3-26A	SISSSSTYIYYADSVKG
484	ABL-CD3-27/ABL-CD3-27A	IINPSNGNTISAQKFQG
485	ABL-CD3-28/ABL-CD3-28A	LGRTYYRSKWYNECAGSVK
486	ABL-CD3-29/ABL-CD3-29A	IIYPGDSETRYRPSFQGQV
487	ABL-CD3-30/ABL-CD3-30A	HIYYSGRTKYNPSLKS
488	ABL-CD3-31/ABL-CD3-31A	IIYPADSDTTYSPSFQGQV
489	ABL-CD3-32/ABL-CD3-32A	SISSSSSYIYYTDSVKG
490	ABL-CD3-33/ABL-CD3-33A	SISRSSSYIYYADSVKG
491	ABL-CD3-34/ABL-CD3-34A	SISRSSSYIYYADSVKG
492	ABL-CD3-35/ABL-CD3-35A	SVNSRGSYIYYADSVKG
493	ABL-CD3-36	NIKEDGSEKYCVDSVKG
494	ABL-CD3-37/ABL-CD3-37A	HIRSSTYSIYYADSVMG
495	ABL-CD3-38/ABL-CD3-38A	EINHSGNTNYNPSLKS
496	ABL-CD3-39/ABL-CD3-39A	AISGSGGSTYYADSVKG
497	ABL-CD3-40/ABL-CD3-40A	AISGSGGSTYYADSVKG
498	ABL-CD3-41/ABL-CD3-41A	SVNSRGSYIYYADSVKG
499	ABL-CD3-42/ABL-CD3-42A	YISSSSSTIYYADSVKG
500	ABL-CD3-43/ABL-CD3-43A	IIYPGDSDTTYSPSFQGQV
501	ABL-CD3-44/ABL-CD3-44A	NIKQDGSEKYYVDSVKG
502	ABL-CD3-45/ABL-CD3-45A	NIKEDGSEKYYVDSVKG
503	ABL-CD3-46/ABL-CD3-46A	SISKSSTYIYYADSVKG
504	ABL-CD3-47/ABL-CD3-47A	YISRSSTTIYYADSVKG
505	ABL-CD3-48/ABL-CD3-48A	SISGSGSYIYYADSVKG
506	ABL-CD3-49/ABL-CD3-49A	SISKSSSYIYYTDSVKG
507	ABL-CD3-50/ABL-CD3-50A	LGRTYSRSKWYNDYAVSVK

508	ABL-CD3-51/ABL-CD3-51A	SISRSSSYIYYADSVKG
509	ABL-CD3-52/ABL-CD3-52A	SISRSTTYIYYADSVKG
510	ABL-CD3-53/ABL-CD3-53A	SITTSSSYIYYADSVKG
511	ABL-CD3-54/ABL-CD3-54A	SISRSSRYIFYADSVRG
512	ABL-CD3-55/ABL-CD3-55A	SISSGSSYIYYADSVKG
513	ABL-CD3-56/ABL-CD3-56A	SISSSSRYTYYADSLKG
514	ABL-CD3-57/ABL-CD3-57A	SISTSSRYIYYTDSVKG
515	ABL-CD3-58/ABL-CD3-58A	SSSRSSYIYYADSVKG
516	ABL-CD3-59/ABL-CD3-59A	SLSRSSNYIYYAVSVKG
517	ABL-CD3-60/ABL-CD3-60A	SISSGSSYIYYADSVKG
518	ABL-CD3-61/ABL-CD3-61A	SISRSGTYIYYADSVKG
519	ABL-CD3-62/ABL-CD3-62A	SISRSSGYIFYADSVKG
520	ABL-CD3-63/ABL-CD3-63A	RIYTSGSTKYNPSLKS
521	ABL-CD3-64/ABL-CD3-64A	SISSSGSYTYYADSVKG
522	ABL-CD3-65	EINHSGSTNYNPSLKS
523	ABL-CD3-66/ABL-CD3-66A	RIYASGSTYYNPSLKS
524	ABL-CD3-67/ABL-CD3-67A	SISRSSSYIYYADSVKG
525	ABL-CD3-68/ABL-CD3-68A	SISGSSSYIYYADSVKG
526	ABL-CD3-69/ABL-CD3-69A	TITSSSRYIYYADSVKG
527	ABL-CD3-70/ABL-CD3-70A	SITSSSSYIYYADSVKG
528	ABL-CD3-71/ABL-CD3-71A	RIYTSGSTNYNPSLKS
529	ABL-CD3-72/ABL-CD3-72A	SISSSRSYIYYADSVKG
530	ABL-CD3-73/ABL-CD3-73A	TFSRSSTYIYYADSVKG
531	ABL-CD3-74/ABL-CD3-74A	SISSSSSYIYYADSVKG
532	ABL-CD3-75/ABL-CD3-75A	SISVSSRYIYFADSVKG
533	ABL-CD3-76/ABL-CD3-76A	SISSSSNYIYYADSVKG
534	ABL-CD3-77/ABL-CD3-77A	SISSSSSYIYYADSVKG
535	ABL-CD3-78/ABL-CD3-78A	CISRSSSYIYYADSVKG
536	ABL-CD3-79	CISRSSSYIYYADSVKG
537	ABL-CD3-80/ABL-CD3-80A	SISSRSRYIYYADSVQG
538	ABL-CD3-81/ABL-CD3-81A	IGYIYYSGSTYYNPSLK
539	ABL-CD3-82/ABL-CD3-82A	SISSSSSYIYYADSVKG
540	ABL-CD3-83/ABL-CD3-83A	TISRSGGYIYDADSVKG
541	ABL-CD3-84/ABL-CD3-84A	SISGSSNYIYYADSVKG
542	ABL-CD3-85/ABL-CD3-85A	SISRRSGYIYYADSVKG
543	ABL-CD3-86/ABL-CD3-86A	TISRSSRYIYYGDSVKG
544	ABL-CD3-87/ABL-CD3-87A	SISSSSSYKYYADSVKG
545	ABL-CD3-88/ABL-CD3-88A	NIKEDGSEKYYVDSVKG
546	ABL-CD3-89/ABL-CD3-89A	SISSRRGYKYHADSVKG
547	ABL-CD3-90/ABL-CD3-90A	SISSSSSYIYYADSVKG
548	ABL-CD3-91/ABL-CD3-91A	SISSSSTYIYYADSVKG
549	ABL-CD3-92/ABL-CD3-92A	YISSSSRYIYYADSVKG
550	ABL-CD3-93/ABL-CD3-93A	SISSSSSYIYYADSVKG
551	ABL-CD3-94/ABL-CD3-94A	SISRSSSYIFYADSVKG
552	ABL-CD3-95/ABL-CD3-95A	SISRSSSYIYYADSVKG
553	ABL-CD3-96/ABL-CD3-96A	SISSSSSYIYYADSVKG
554	ABL-CD3-97/ABL-CD3-97A	YISRSSTYIYYADSMKG
555	ABL-CD3-98/ABL-CD3-98A	SISSSSSYIYYADSVKG

556	ABL-CD3-99/ABL-CD3-99A	SISSSSSYIYYADSVKG
557	ABL-CD3-100/ABL-CD3-100A	YISSSSNYIYYADSVKG
558	ABL-CD3-101/ABL-CD3-101A	SISSSSSYIYYADSVKG
559	ABL-CD3-102/ABL-CD3-102A	SISSSSSYIYYADSVKG
560	ABL-CD3-103/ABL-CD3-103A	SISSSSSYISYADSVKG
561	ABL-CD3-104/ABL-CD3-104A	SISSSSSYIYYADSVKG
562	ABL-CD3-105/ABL-CD3-105A	SISSSSSYIYYADSVKG
563	ABL-CD3-106/ABL-CD3-106A	SISRSSSYIFYADSVKG
564	ABL-CD3-107/ABL-CD3-107A	FIYPGDSDTIYSPSFQGQV
565	ABL-CD3-108/ABL-CD3-108A	SISSSSRYIYYADSVKG
566	ABL-CD3-109/ABL-CD3-109A	SISSSSSYIYYADSVKG
567	ABL-CD3-110/ABL-CD3-110A	SISSSSSYIYYADSVKG
568	ABL-CD3-111/ABL-CD3-111A	YISRSSTYIYYADSMKG
569	ABL-CD3-112/ABL-CD3-112A	SISSSSSYIYYADSVKG
570	ABL-CD3-113/ABL-CD3-113A	SISSSSSYIYYADSVKG
571	ABL-CD3-36A	NIKEDGSEKYYVDSVKG
572	ABL-CD3-65A	EIQHSGSTNYNPSLKS
573	ABL-CD3-79A	SISRSSSYIYYADSVKG
Heavy Chain CDR3 Sequences		
574	ABL-CD3-1/ABL-CD3-1A	EKWELLYFDY
575	ABL-CD3-2/ABL-CD3-2A	GSRDAFDI
576	ABL-CD3-3/ABL-CD3-3A	AERGSYAVDI
577	ABL-CD3-4/ABL-CD3-4A	AERGSYAFDI
578	ABL-CD3-5/ABL-CD3-5A	DRRATLDY
579	ABL-CD3-6/ABL-CD3-6A	DRRELLLDC
580	ABL-CD3-7/ABL-CD3-7A	EPPTLGMDY
581	ABL-CD3-8/ABL-CD3-8A	DRRELLLDY
582	ABL-CD3-9/ABL-CD3-9A	DRRELLLDY
583	ABL-CD3-10/ABL-CD3-10A	ERKWELFLDY
584	ABL-CD3-11/ABL-CD3-11A	LGYYPYWFFDV
585	ABL-CD3-12/ABL-CD3-12A	EPPTLGMDY
586	ABL-CD3-13/ABL-CD3-13A	ERRTGYFDY
587	ABL-CD3-14/ABL-CD3-14A	ERWELLYFDY
588	ABL-CD3-15/ABL-CD3-15A	ERWIQLYSDY
589	ABL-CD3-16/ABL-CD3-16A	ERRTGYFDY
590	ABL-CD3-17/ABL-CD3-17A	ERWELLYFDY
591	ABL-CD3-18/ABL-CD3-18A	GGSLDY
592	ABL-CD3-19/ABL-CD3-19A	ERWELLYFDY
593	ABL-CD3-20/ABL-CD3-20A	ERRELLFDY
594	ABL-CD3-21/ ABL-CD3-21A	DGKGAIFLDY
595	ABL-CD3-22/ABL-CD3-22A	DGPVDYGMDV
596	ABL-CD3-23/ABL-CD3-23A	EPRTLGMDY
597	ABL-CD3-24/ABL-CD3-24A	EPPTLGMDY
598	ABL-CD3-25/ABL-CD3-25A	EPRTLGMDY
599	ABL-CD3-26/ABL-CD3-26A	EPRTLGMDY
600	ABL-CD3-27	CWGYYVMDV
601	ABL-CD3-28/ABL-CD3-28A	ERKWELFLDY
602	ABL-CD3-29/ABL-CD3-29A	QGAYDGFDI

603	ABL-CD3-30/ABL-CD3-30A	ENRNGAFDI
604	ABL-CD3-31/ABL-CD3-31A	HGGSYILDAFDI
605	ABL-CD3-32/ABL-CD3-32A	AERGSYAFDF
606	ABL-CD3-33/ABL-CD3-33A	EPPTLGMDY
607	ABL-CD3-34/ABL-CD3-34A	EPRTLGMDY
608	ABL-CD3-35/ABL-CD3-35A	DRRELLLDY
609	ABL-CD3-36/ABL-CD3-36A	ERRTGYFDY
610	ABL-CD3-37/ABL-CD3-37A	AKTGGDAFDI
611	ABL-CD3-38/ABL-CD3-38A	EVEIWGYFDY
612	ABL-CD3-39/ABL-CD3-39A	EGIVGARAEYFQH
613	ABL-CD3-40/ABL-CD3-40A	EGIVGARAEYFQH
614	ABL-CD3-41/ABL-CD3-41A	DRRELLLDY
615	ABL-CD3-42/ABL-CD3-42A	DGPVDYGMDV
616	ABL-CD3-43/ABL-CD3-43A	QGELDAFDI
617	ABL-CD3-44/ABL-CD3-44A	GSFDY
618	ABL-CD3-45/ABL-CD3-45A	ERRTGYLDY
619	ABL-CD3-46/ABL-CD3-46A	ERRTLAFDI
620	ABL-CD3-47/ABL-CD3-47A	ERWELLYFDY
621	ABL-CD3-48/ABL-CD3-48A	EPPTLGMDY
622	ABL-CD3-49/ABL-CD3-49A	ERRTLAFDI
623	ABL-CD3-50/ABL-CD3-50A	ERKWELFLDY
624	ABL-CD3-51/ABL-CD3-51A	ERWELLYFDY
625	ABL-CD3-52/ABL-CD3-52A	DGKGAIFLDY
626	ABL-CD3-53/ABL-CD3-53A	VTFDAFDI
627	ABL-CD3-54/ABL-CD3-54A	EKRELLFDY
628	ABL-CD3-55/ABL-CD3-55A	EKRELLFDY
629	ABL-CD3-56/ABL-CD3-56A	NLYNALDY
630	ABL-CD3-57/ABL-CD3-57A	NWGYDVFDI
631	ABL-CD3-58/ABL-CD3-58A	EKWELLFFDY
632	ABL-CD3-59/ABL-CD3-59A	ERWELLYFDY
633	ABL-CD3-60/ABL-CD3-60A	EKRELLFDY
634	ABL-CD3-61/ABL-CD3-61A	ERWELLYFDY
635	ABL-CD3-62/ABL-CD3-62A	ERVGAGFDY
636	ABL-CD3-63/ABL-CD3-63A	ERIRDLYFDY
637	ABL-CD3-64/ABL-CD3-64A	ERGKGAGMDV
638	ABL-CD3-65/ABL-CD3-65A	EYYYYGMDV
639	ABL-CD3-66/ABL-CD3-66A	EKRSRLYFDY
640	ABL-CD3-67/ABL-CD3-67A	ERWELLYFDY
641	ABL-CD3-68/ABL-CD3-68A	ERWNLLYFDY
642	ABL-CD3-69/ABL-CD3-69A	VTFDAFDI
643	ABL-CD3-70/ABL-CD3-70A	EKWELLFFDY
644	ABL-CD3-71/ABL-CD3-71A	ERISRLYFDY
645	ABL-CD3-72/ABL-CD3-72A	EDRYRLFFDY
646	ABL-CD3-73/ABL-CD3-73A	EKWDLLYFDY
647	ABL-CD3-74/ABL-CD3-74A	DRGELTLWY
648	ABL-CD3-75/ABL-CD3-75A	DRRELLLDY
649	ABL-CD3-76/ABL-CD3-76A	DRRELPLDY
650	ABL-CD3-77/ABL-CD3-77A	DGELGIGTYFDY

651	ABL-CD3-78/ABL-CD3-78A	ERWELLYFDY
652	ABL-CD3-79/ABL-CD3-79A	ERWELLYFDY
653	ABL-CD3-80/ABL-CD3-80A	DWRELLLDY
654	ABL-CD3-81/ABL-CD3-81A	ERKTSLPFDI
655	ABL-CD3-82/ABL-CD3-82A	DRRELLLDY
656	ABL-CD3-83/ABL-CD3-83A	DFNWTFDN
657	ABL-CD3-84/ABL-CD3-84A	EKWVLLFFDY
658	ABL-CD3-85/ABL-CD3-85A	DLNWAFDY
659	ABL-CD3-86/ABL-CD3-86A	DHNWSFDY
660	ABL-CD3-87/ABL-CD3-87A	EGGNSHGMDV
661	ABL-CD3-88/ABL-CD3-88A	ERRTGYFDY
662	ABL-CD3-89/ABL-CD3-89A	VPYSGSYFDY
663	ABL-CD3-90/ABL-CD3-90A	YRYNWNDY
664	ABL-CD3-91/ABL-CD3-91A	YRYNWNDY
665	ABL-CD3-92/ABL-CD3-92A	EGPNWGTHAFDI
666	ABL-CD3-93/ABL-CD3-93A	YRYNWNDY
667	ABL-CD3-94/ABL-CD3-94A	ERRNGFDY
668	ABL-CD3-95/ABL-CD3-95A	YRYNWNDY
669	ABL-CD3-96/ABL-CD3-96A	AVYNYFDQ
670	ABL-CD3-97/ABL-CD3-97A	EGPNWGTHAFDI
671	ABL-CD3-98/ABL-CD3-98A	ERRELAFDI
672	ABL-CD3-99/ABL-CD3-99A	ERRELSFDY
673	ABL-CD3-100/ABL-CD3-100A	EGPNWGTHAFDI
674	ABL-CD3-101/ABL-CD3-101A	YRYNWNDY
675	ABL-CD3-102/ABL-CD3-102A	ERRELSFDY
676	ABL-CD3-103/ABL-CD3-103A	VSYNSFDY
677	ABL-CD3-104/ABL-CD3-104A	AVYNYFDQ
678	ABL-CD3-105/ABL-CD3-105A	YRYNWNDY
679	ABL-CD3-106/ABL-CD3-106A	ERRNGFDY
680	ABL-CD3-107/ABL-CD3-107A	QGYLDAFDI
681	ABL-CD3-108/ABL-CD3-108A	ALYNYFDY
682	ABL-CD3-109/ABL-CD3-109A	YRYNWNDY
683	ABL-CD3-110/ABL-CD3-110A	ERRDLAFDI
684	ABL-CD3-111/ABL-CD3-111A	EGPNWGTHAFDI
685	ABL-CD3-112/ABL-CD3-112A	ERRELSFDY
686	ABL-CD3-113/ABL-CD3-113A	ERRELSFDY
687	ABL-CD3-27A	SWGYYVMDV

Table 1D. VL Sequences

SEQ ID NO:	Name	Sequence
		Light Chain Variable Region Sequences
688	ABL-CD3-1	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
689	ABL-CD3-2	SYELTQPPSVSVSPGQTASITCSGDKLGNKYACWYQQKPGQSP VLVIYQDSKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDISTVVFGGGTKLTVL

690	ABL-CD3-3	SYELTQPPSVSVSPGQTASITCSGDKLRDKYACWYQQKPGQSP VLVIYQDSKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDSSTVVFGGGTKLTVL
691	ABL-CD3-4	SYELTQPPSVSVSPGQTASITCSGDKLGDKYAGWYQQKPGQSP VLVIYQDSKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDSSTVVFGGGTKLTVL
692	ABL-CD3-5	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNHVFGGGTKLTVL
693	ABL-CD3-6	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHSWVFGGGTKLTVL
694	ABL-CD3-7	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDNSNRVFGGGTKLTVL
695	ABL-CD3-8	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHSWVFGGGTKLTVL
696	ABL-CD3-9	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHCWVFGGGTKLTVL
697	ABL-CD3-10	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTMIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSLDSSSVVFGGGTKLTVL
698	ABL-CD3-11	NFMLTQPHSVSESPGKTVTIACTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNQVFGGGTKLTVL
699	ABL-CD3-12	NFMLTQPHSVSESPGKTVTISCTRSNGSITSNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDNSNRVFGEKTKLTVL
700	ABL-CD3-13	DIQMTQSPSTLSASVGDRVTITCRASQSISNWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFANYYC QQYKSYSWTFGQGTKVEIK
701	ABL-CD3-14	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
702	ABL-CD3-15	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
703	ABL-CD3-16	DIQMTQSPSTLSASVGDRVTITCRASQSIGSWLAWYQQKPGKA PKLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYNSYSWTFGQGTKVEIK
704	ABL-CD3-17	NFMLTQPHSVSESPGKTVTISCTRSSGSIASKYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSNNRVFGGGTKLTVL
705	ABL-CD3-18	DIVMTQTPLSSPVTPGQPASISCRSSQSLVHSDGNTYLNWLQQR PGQPPRLLIYKISDRFSGVPDRFSGSGAGTDFTLKIGRVEAEDVG VYYCMQSTQFPITFGQGTRLEIK
706	ABL-CD3-19	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDNSNRVFGGGTKLTVL
707	ABL-CD3-20	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTSVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDRSNRVFGGGTKLTVL

708	ABL-CD3-21	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTHSSGNHRVFGGGTKLTVL
709	ABL-CD3-22	SYELTQPPSVSVSPGQTARITCSGDALPKQYTYWCQQKPGQAP VLVIYKDSERPSGIPERFSGSSSGTTVTLTISGVQAEDEADYYCQ SADSSGTYRVFGGGTKLTVL
710	ABL-CD3-23	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNHRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY FCQSFDSSNRVFGGGTKLTVL
711	ABL-CD3-24	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFYSSNRVFGGGTELTVL
712	ABL-CD3-25	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNHRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY FCQSFDSSNRVFGGGTKLTVL
713	ABL-CD3-26	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNHRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY FCQSFDSSNRVFGGGTKLTVL
714	ABL-CD3-27	QTVVTQEPSFSVSPGGTVTLTCGLNSGSVSTSYYPSWYQQTPG QTPRTLIYSTNTRSSGVPDRFSGSILGNKAALTITGAQADDESDY YCVLYMGSGIWVFGGGTKLTVL
715	ABL-CD3-28	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDSSNVVFGGGTKLTVL
716	ABL-CD3-29	QSVLTQPPSASGTPGQRVTISCSGSSSNIGSNYVYWYQQLPGTA PKLLIYSNNQRPSGVPDRFSGSKSGTSASLAISGLRSEDEADYYC EAWDDSLSGPVFGGGTKLTVL
717	ABL-CD3-30	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQHRPGSS PTTVIYEDDQRPSGIPDRFSGSIDSSSNSASLTISGLKTEDEADYY CQSYNSSNQVFGGGTKLTVL
718	ABL-CD3-31	DIVMTQSPLSLPVTPGEPASISCRSSQSLLHSNGYNYLDWYLQK PGQSPQLLIYLGSNRASGVPDRFSGSGSGTDFTLKISRVEAEDV GFYYCMQPLQTPYTFGQGTKLEIK
719	ABL-CD3-32	SYELTQPPSVSVSPGQTASITCSGDKLGYKYASWYQQKPGQSP VLVIYQDSKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDSSTVVFGGGTKLTVL
720	ABL-CD3-33	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYYNSNRVFGGGTKLTVL
721	ABL-CD3-34	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
722	ABL-CD3-35	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHCWVFGGGTKLTVL
723	ABL-CD3-36	DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWFQQKTGKAP KLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQ QYISYSWTFGQGTKVEIK
724	ABL-CD3-37	DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAP KLLIHKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQ QYNSYWTFGQGTKVEIK
725	ABL-CD3-38	QSVLTQPPSVSGAPGQRVTISCTGSSSNIGAGYDVHWYQQLPG TAPKLLIYGNSNRPSGVPDRFSGSKSGTSASLAITGLQAEDETD YNCQSYDSSLSGYVFGTGTKVTVL

726	ABL-CD3-39	DVVMTQSPLSLPVTLGQPASISCRSSQSLVYSDGNTYLTWFQQ RPGQSPRRLIYKVSNRDSGVPDRFSGSGSGTDFTLKISRVEAED VEIYYCMQGTHWPLTFGGGTKVEIK
727	ABL-CD3-40	QSVLTQPPSASGTPGQRVTISCSGSSSNIGSNTVNWYQQFPGTA PKLLIYSNNQRPSGVPDRFSGSKSGTSASLAISGLQSEDEADYY CAPWDDSLNGVVFGGGTKLTVL
728	ABL-CD3-41	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHCWVFGGGTKLTVL
729	ABL-CD3-42	SYELTQPPSVSVSPGQTARITCSGDALPKQYTYWCQQKPGQAPI LVIYKDSERPSGIPERFSGSSSGTTVTLTISGVQADDEADYYCQS ADSSGTYRVFGGGTKLTVL
730	ABL-CD3-43	QSALTQPASVSGSPGQSITISCTGTSSDVGSYNLVSWYQQHPGK APKLMIYEDIRRPSGVSNRFSASKSGDTASLTISGLQAEDEADY YCCSYAGSTTFAIFGGGTKLTVL
731	ABL-CD3-44	QPVLTQPSSHSASSGASVRLTCMLSSGFSVGDFWIRWYQQKPG NPPRYLLFYHSDSNKGQGSGVPSRFSGSNDASANAGILRISGLQ PEDEADYYCGTWHSNSKTWVFGGGTKLTVL
732	ABL-CD3-45	DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAP NLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQ QYKSYSWTIGQGTKVEIK
733	ABL-CD3-46	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQCYDRSNRVFGGGTKLTVL
734	ABL-CD3-47	NFMLTQPHSVSESPGKTVTISCTRSSGSIASKYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYYSNNRVFGGGTKLTVL
735	ABL-CD3-48	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDSSNRVFGGGTKLTVL
736	ABL-CD3-49	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRSSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQCYDRSNRVFGGGTKLTVL
737	ABL-CD3-50	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGISP TTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYY CQSFDTSNVVFGGGTKLTVL
738	ABL-CD3-51	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
739	ABL-CD3-52	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHRVFGGGTKLTVL
740	ABL-CD3-53	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
741	ABL-CD3-54	NSMLTQPHSVSESPGKTVTISCTRSSGSIASYYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDSSNRVFGGGTKLTVL
742	ABL-CD3-55	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDRSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
743	ABL-CD3-56	FMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSP TTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLQTEDEADYY CQSYDSSNRVFGGGTKLTVL

744	ABL-CD3-57	QPVLTQPSSHSASSGASVRLTCMLSSGFSVGDFWIRWYQQKPG NPPRYLLYYHSDSNKGQGSGVPSRFSGSNDASANAGILRISGLQ PEDEADYYCGTWHSNSKTQVFGGGTKLTVL
745	ABL-CD3-58	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNFVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDSSNRVFGGGTKLTVL
746	ABL-CD3-59	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLQTEDEADY YCQSYDNSIRVFGGGTKLTVL
747	ABL-CD3-60	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDRSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
748	ABL-CD3-61	QTVVTQEPSLTVSPGGTVTLTCASSTGAVTSGYYPNWFQQKPG QAPRALIYSTSNKHSWTPARFSGSLLGGKAALTLSGVQPEDEA EYYCLLYYGGAYVFGTGTKVTVL
749	ABL-CD3-62	NFMLTQPHSVSESPGKTVAISCTRSSGSIASNYVQWYQQRPGSS PTAVIYEDNQRPSGVPDRFSGSIDSSSNSAFLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
750	ABL-CD3-63	NFMLTQPHSVSESPGKTVTISCTRTSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEAAY YCQSYDRSNRVFGGGTKLTVL
751	ABL-CD3-64	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
752	ABL-CD3-65	QSVLTQPPSASGTPGQRVTISCSGSSSNIGSNYVYWYQQLPGTA PKLLIYSNNQRPSGVPDRFSGSKSGTSASLAISGLRSEDEADYYC AAWDDSLSGVVFGGGTKLTVL
753	ABL-CD3-66	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEGDY YCQSYDRSNRVFGGGTKLTVL
754	ABL-CD3-67	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYRQRPGSS PTTVIYEDNQRPSGVPDRFSGAIDSSSTSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
755	ABL-CD3-68	SYELTQPPSVSVSPGQTARITCSGDALPKQYAYWYQQKPGQAP VLVIYKDSERPSGIPERFSGSSSGTTVTLTISGVQAEDEADYYCQ SADSSGTYVVFGGGTKLTVL
756	ABL-CD3-69	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
757	ABL-CD3-70	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
758	ABL-CD3-71	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDRSNRVFGGGTKLTVL
759	ABL-CD3-72	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
760	ABL-CD3-73	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNRRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDNSNRVFGGGTTLTVL
761	ABL-CD3-74	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHWVFGGGTKLTVL

762	ABL-CD3-75	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHNWVFGGGTKLTVL
763	ABL-CD3-76	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHWVFGGGTKLTVL
764	ABL-CD3-77	QSVLTQPPSVSGAPGQRVTISCTGSSSNIGAGYDVHWYQQLPG TAPKLLIYGNSNRPSGVPDRFSGSKSGTSASLAITGLQAEDEAD YYCQSYDSSLSGSVFGGGTKLTVL
765	ABL-CD3-78	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDGSNRVFGGGTKLTVL
766	ABL-CD3-79	QTVVTQEPSFSVSPGGTVTLTCGLSSGSVSTSYYPSWYQQTPGQ APRTLIYSTNTRSSGVPDRFSGSILGNKAALTITGAQADDESDY YCVLYMGSGIWVFGGGTKLTVL
767	ABL-CD3-80	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHSWVFGGGTKLTVL
768	ABL-CD3-81	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEAYY YCQSFDSSNRVFGGGTKLTVL
769	ABL-CD3-82	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHSWVFGGGTKLTVL
770	ABL-CD3-83	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSSDRSNVVFGGGTKLTVL
771	ABL-CD3-84	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTMIYEDTQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
772	ABL-CD3-85	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNHRPSGVPDRFSGSIDSSSNSASLTIAGLKTEDEADY YCQSCDSSNVVFGGGTKLTVL
773	ABL-CD3-86	NFMLTQPLSVSESPGKTLTISCTRNSGSIASNYVQWYRQRPGSS PTTVIYEDKQRPSGVPDRFSGSIDSSSNSASLTISGLKAEDEADY YCQSCDSSNVVFGGGTTLTVL
774	ABL-CD3-87	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
775	ABL-CD3-88	DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAP NLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQ QYNSYSWTFGQGTKVEIK
776	ABL-CD3-89	EIVLTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQA PRLLIYGASSRATGIPDRFSGSGSGTDFTLTISRLAPEDFAVYYC QQYGSSRWSFGQGTKVEIK
777	ABL-CD3-90	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
778	ABL-CD3-91	SYELTQPPSVSVSPGQTASITCSGDKLGNKYACWYQQKPGQSP VLVIYQDSKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDISTVVFGGGTKLTVL
779	ABL-CD3-92	SYELTQPPSVSVSPGQTASITCSGDKLRDKYACWYQQKPGQSP VLVIYQDSKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDSSTVVFGGGTKLTVL

780	ABL-CD3-93	SYELTQPPSVSVSPGQTASITCSGDKLGDKYAGWYQQKPGQSP VLVIYQDSKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDSSTVVFGGGTKLTVL
781	ABL-CD3-94	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNHVFGGGTKLTVL
782	ABL-CD3-95	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHSWVFGGGTKLTVL
783	ABL-CD3-96	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDNSNRVFGGGTKLTVL
784	ABL-CD3-97	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHSWVFGGGTKLTVL
785	ABL-CD3-98	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHCWVFGGGTKLTVL
786	ABL-CD3-99	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTMIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSLDSSSVVFGGGTKLTVL
787	ABL-CD3-100	NFMLTQPHSVSESPGKTVTIACTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNQVFGGGTKLTVL
788	ABL-CD3-101	NFMLTQPHSVSESPGKTVTISCTRSNGSITSNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDNSNRVFGEKTKLTVL
789	ABL-CD3-102	DIQMTQSPSTLSASVGDRVTITCRASQSISNWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFANYYC QQYKSYSWTFGQGTKVEIK
790	ABL-CD3-103	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
791	ABL-CD3-104	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGGGTKLTVL
792	ABL-CD3-105	DIQMTQSPSTLSASVGDRVTITCRASQSIGSWLAWYQQKPGKA PKLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYNSYSWTFGQGTKVEIK
793	ABL-CD3-106	NFMLTQPHSVSESPGKTVTISCTRSSGSIASKYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSNNRVFGGGTKLTVL
794	ABL-CD3-107	DIVMTQTPLSSPVTPGQPASISCRSSQSLVHSDGNTYLNWLQQR PGQPPRLLIYKISDRFSGVPDRFSGSGAGTDFTLKIGRVEAEDVG VYYCMQSTQFPITFGQGTRLEIK
795	ABL-CD3-108	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDNSNRVFGGGTKLTVL
796	ABL-CD3-109	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTSVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDRSNRVFGGGTKLTVL
797	ABL-CD3-110	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTHSSGNHRVFGGGTKLTVL

798	ABL-CD3-111	SYELTQPPSVSVSPGQTARITCSGDALPKQYTYWCQQKPGQAP VLVIYKDSERPSGIPERFSGSSSGTTVTLTISGVQAEDEADYYCQ SADSSGTYRVFGGGTKLTVL
799	ABL-CD3-112	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNHRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY FCQSFDSSNRVFGGGTKLTVL
800	ABL-CD3-113	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFYSSNRVFGGGTELTVL
801	ABL-CD3-1A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
802	ABL-CD3-2A	SYELTQPPSVSVSPGQTASITCSGDKLGNKYACWYQQKPGQSP VLVIYQDSKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDISTVVFGCGTKLTVL
803	ABL-CD3-3A	SYELTQPPSVSVSPGQTASITCSGDKLRDKYACWYQQKPGQSP VLVIYQDSKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDSSTVVFGCGTKLTVL
804	ABL-CD3-4A	SYELTQPPSVSVSPGQTASITCSGDKLGDKYAGWYQQKPGQSP VLVIYQDSKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDSSTVVFGCGTKLTVL
805	ABL-CD3-5A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNHVFGCGTKLTVL
806	ABL-CD3-6A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHSWVFGCGTKLTVL
807	ABL-CD3-7A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDNSNRVFGCGTKLTVL
808	ABL-CD3-8A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHSWVFGCGTKLTVL
809	ABL-CD3-9A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHCWVFGCGTKLTVL
810	ABL-CD3-10A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTMIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSLDSSSVVFGCGTKLTVL
811	ABL-CD3-11A	NFMLTQPHSVSESPGKTVTIACTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNQVFGCGTKLTVL
812	ABL-CD3-12A	NFMLTQPHSVSESPGKTVTISCTRSNGSITSNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDNSNRVFGCKTKLTVL
813	ABL-CD3-13A	DIQMTQSPSTLSASVGDRVTITCRASQSISNWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFANYYC QQYKSYSWTFGCGTKVEIK
814	ABL-CD3-14A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
815	ABL-CD3-15A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL

816	ABL-CD3-16A	DIQMTQSPSTLSASVGDRVTITCRASQSIGSWLAWYQQKPGKA PKLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYNSYSWTFGCGTKVEIK
817	ABL-CD3-17A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASKYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSNNRVFGCGTKLTVL
818	ABL-CD3-18A	DIVMTQTPLSSPVTPGQPASISCRSSQSLVHSDGNTYLNWLQQR PGQPPRLLIYKISDRFSGVPDRFSGSGAGTDFTLKIGRVEAEDVG VYYCMQSTQFPITFGCGTRLEIK
819	ABL-CD3-19A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDNSNRVFGCGTKLTVL
820	ABL-CD3-20A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTSVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDRSNRVFGCGTKLTVL
821	ABL-CD3-21A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTHSSGNHRVFGCGTKLTVL
822	ABL-CD3-22A	SYELTQPPSVSVSPGQTARITCSGDALPKQYTYWYQQKPGQAP VLVIYKDSERPSGIPERFSGSSSGTTVTLTISGVQAEDEADYYCQ SADSSGTYRVFGCGTKLTVL
823	ABL-CD3-23A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNHRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY FCQSFDSSNRVFGCGTKLTVL
824	ABL-CD3-24A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFYSSNRVFGCGTELTVL
825	ABL-CD3-25A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNHRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY FCQSFDSSNRVFGCGTKLTVL
826	ABL-CD3-26A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNHRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY FCQSFDSSNRVFGCGTKLTVL
827	ABL-CD3-27A	QTVVTQEPSFSVSPGGTVTLTCGLNSGSVSTSYYPSWYQQTPG QTPRTLIYSTNTRSSGVPDRFSGSILGNKAALTITGAQADDESDY YCVLYMGSGIWVFGCGTKLTVL
828	ABL-CD3-28A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDSSNVVFGCGTKLTVL
829	ABL-CD3-29A	QSVLTQPPSASGTPGQRVTISCSGSSSNIGSNYVYWYQQLPGTA PKLLIYSNNQRPSGVPDRFSGSKSGTSASLAISGLRSEDEADYYC EAWDDSLSGPVFGCGTKLTVL
830	ABL-CD3-30A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQHRPGSS PTTVIYEDDQRPSGIPDRFSGSIDSSSNSASLTISGLKTEDEADYY CQSYNSSNQVFGCGTKLTVL
831	ABL-CD3-31A	DIVMTQSPLSLPVTPGEPASISCRSSQSLLHSNGYNYLDWYLQK PGQSPQLLIYLGSNRASGVPDRFSGSGSGTDFTLKISRVEAEDV GFYYCMQPLQTPYTFGCGTKLEIK
832	ABL-CD3-32A	SYELTQPPSVSVSPGQTASITCSGDKLGYKYASWYQQKPGQSP VLVIYQDSKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDSSTVVFGCGTKLTVL
833	ABL-CD3-33A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYYNSNRVFGCGTKLTVL

834	ABL-CD3-34A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
835	ABL-CD3-35A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHCWVFGCGTKLTVL
836	ABL-CD3-36A	DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWFQQKTGKAP KLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQ QYISYSWTFGCGTKVEIK
837	ABL-CD3-37A	DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAP KLLIHKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQ QYNSYWTFGCGTKVEIK
838	ABL-CD3-38A	QSVLTQPPSVSGAPGQRVTISCTGSSSNIGAGYDVHWYQQLPG TAPKLLIYGNSNRPSGVPDRFSGSKSGTSASLAITGLQAEDETD YNCQSYDSSLSGYVFGCGTKVTVL
839	ABL-CD3-39A	DVVMTQSPLSLPVTLGQPASISCRSSQSLVYSDGNTYLTWFQQ RPGQSPRRLIYKVSNRDSGVPDRFSGSGSGTDFTLKISRVEAED VEIYYCMQGTHWPLTFGCGTKVEIK
840	ABL-CD3-40A	QSVLTQPPSASGTPGQRVTISCSGSSSNIGSNTVNWYQQFPGTA PKLLIYSNNQRPSGVPDRFSGSKSGTSASLAISGLQSEDEADYY CAPWDDSLNGVVFGCGTKLTVL
841	ABL-CD3-41A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHSWVFGCGTKLTVL
842	ABL-CD3-42A	SYELTQPPSVSVSPGQTARITCSGDALPKQYTYWCQQKPGQAPI LVIYKDSERPSGIPERFSGSSSGTTVTLTISGVQADDEADYYCQS ADSSGTYRVFGCGTKLTVL
843	ABL-CD3-43A	QSALTQPASVSGSPGQSITISCTGTSSDVGSYNLVSWYQQHPGK APKLMIYEDIRRPSGVSNRFSASKSGDTASLTISGLQAEDEADY YCSSYAGSTTFAIFGCGTKLTVL
844	ABL-CD3-44A	QPVLTQPSSHSASSGASVRLTCMLSSGFSVGDFWIRWYQQKPG NPPRYLLFYHSDSNKGQGSGVPSRFSGSNDASANAGILRISGLQ PEDEADYYCGTWHSNSKTWVFGCGTKLTVL
845	ABL-CD3-45A	DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAP NLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQ QYKSYSWTIGCGTKVEIK
846	ABL-CD3-46A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQCYDRSNRVFGCGTKLTVL
847	ABL-CD3-47A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASKYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYYSNNRVFGCGTKLTVL
848	ABL-CD3-48A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDSSNRVFGCGTKLTVL
849	ABL-CD3-49A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRSSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDRSNRVFGCGTKLTVL
850	ABL-CD3-50A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGISP TTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYY CQSFDTSNVVFGCGTKLTVL
851	ABL-CD3-51A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL

852	ABL-CD3-52A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHRVFGCGTKLTVL
853	ABL-CD3-53A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
854	ABL-CD3-54A	NSMLTQPHSVSESPGKTVTISCTRSSGSIASYYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDSSNRVFGCGTKLTVL
855	ABL-CD3-55A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDRSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
856	ABL-CD3-56A	FMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSP TTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLQTEDEADYY CQSYDSSNRVFGCGTKLTVL
857	ABL-CD3-57A	QPVLTQPSSHSASSGASVRLTCMLSSGFSVGDFWIRWYQQKPG NPPRYLLYYHSDSNKGQGSGVPSRFSGSNDASANAGILRISGLQ PEDEADYYCGTWHSNSKTQVFGCGTKLTVL
858	ABL-CD3-58A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNFVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDSSNRVFGCGTKLTVL
859	ABL-CD3-59A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLQTEDEADY YCQSYDNSIRVFGCGTKLTVL
860	ABL-CD3-60A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDRSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
861	ABL-CD3-61A	QTVVTQEPSLTVSPGGTVTLTCASSTGAVTSGYYPNWFQQKPG QAPRALIYSTSNKHSWTPARFSGSLLGGKAALTLSGVQPEDEA EYYCLLYYGGAYVFGCGTKVTVL
862	ABL-CD3-62A	NFMLTQPHSVSESPGKTVAISCTRSSGSIASNYVQWYQQRPGSS PTAVIYEDNQRPSGVPDRFSGSIDSSSNSAFLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
863	ABL-CD3-63A	NFMLTQPHSVSESPGKTVTISCTRTSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEAAY YCQSYDRSNRVFGCGTKLTVL
864	ABL-CD3-64A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
865	ABL-CD3-65A	QSVLTQPPSASGTPGQRVTISCSGSSSNIGSNYVYWYQQLPGTA PKLLIYSNNQRPSGVPDRFSGSKSGTSASLAISGLRSEDEADYYC AAWDDSLSGVVFGCGTKLTVL
866	ABL-CD3-66A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEGDY YCQSYDRSNRVFGCGTKLTVL
867	ABL-CD3-67A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYRQRPGSS PTTVIYEDNQRPSGVPDRFSGAIDSSSTSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
868	ABL-CD3-68A	SYELTQPPSVSVSPGQTARITCSGDALPKQYAYWYQQKPGQAP VLVIYKDSERPSGIPERFSGSSSGTTVTLTISGVQAEDEADYYCQ SADSSGTYVVFGCGTKLTVL
869	ABL-CD3-69A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL

870	ABL-CD3-70A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
871	ABL-CD3-71A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDRSNRVFGCGTKLTVL
872	ABL-CD3-72A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
873	ABL-CD3-73A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNRRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDNSNRVFGCGTTLTVL
874	ABL-CD3-74A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHWVFGCGTKLTVL
875	ABL-CD3-75A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHNWVFGCGTKLTVL
876	ABL-CD3-76A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHWVFGCGTKLTVL
877	ABL-CD3-77A	QSVLTQPPSVSGAPGQRVTISCTGSSSNIGAGYDVHWYQQLPG TAPKLLIYGNSNRPSGVPDRFSGSKSGTSASLAITGLQAEDEAD YYCQSYDSSLSGSVFGCGTKLTVL
878	ABL-CD3-78A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDGSNRVFGCGTKLTVL
879	ABL-CD3-79A	QTVVTQEPSFSVSPGGTVTLTCGLSSGSVSTSYYPSWYQQTPGQ APRTLIYSTNTRSSGVPDRFSGSILGNKAALTITGAQADDESDY YCVLYMGSGIWVFGCGTKLTVL
880	ABL-CD3-80A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHSWVFGCGTKLTVL
881	ABL-CD3-81A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEAYY YCQSFDSSNRVFGCGTKLTVL
882	ABL-CD3-82A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHSWVFGCGTKLTVL
883	ABL-CD3-83A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSSDRSNVVFGCGTKLTVL
884	ABL-CD3-84A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTMIYEDTQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
885	ABL-CD3-85A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNHRPSGVPDRFSGSIDSSSNSASLTIAGLKTEDEADY YCQSYDSSNVVFGCGTKLTVL
886	ABL-CD3-85B	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNHRPSGVPDRFSGSIDSSSNSASLTIAGLKTEDEADY YCQSSDSSNVVFGCGTKLTVL
887	ABL-CD3-86A	NFMLTQPLSVSESPGKTLTISCTRNSGSIASNYVQWYRQRPGSS PTTVIYEDKQRPSGVPDRFSGSIDSSSNSASLTISGLKAEDEADY YCQSCDSSNVVFGCGTTLTVL

888	ABL-CD3-87A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
889	ABL-CD3-88A	DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAP NLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQ QYNSYSWTFGCGTKVEIK
890	ABL-CD3-89A	EIVLTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQA PRLLIYGASSRATGIPDRFSGSGSGTDFTLTISRLAPEDFAVYYC QQYGSSRWSFGCGTKVEIK
891	ABL-CD3-90A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
892	ABL-CD3-91A	SYELTQPPSVSVSPGQTASITCSGDKLGNKYACWYQQKPGQSP VLVIYQDSKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDISTVVFGCGTKLTVL
893	ABL-CD3-92A	SYELTQPPSVSVSPGQTASITCSGDKLRDKYACWYQQKPGQSP VLVIYQDSKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDSSTVVFGCGTKLTVL
894	ABL-CD3-93A	SYELTQPPSVSVSPGQTASITCSGDKLGDKYAGWYQQKPGQSP VLVIYQDSKRPSGIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDSSTVVFGCGTKLTVL
895	ABL-CD3-94A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNHVFGCGTKLTVL
896	ABL-CD3-95A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHSWVFGCGTKLTVL
897	ABL-CD3-96A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDNSNRVFGCGTKLTVL
898	ABL-CD3-97A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHSWVFGCGTKLTVL
899	ABL-CD3-98A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHCWVFGCGTKLTVL
900	ABL-CD3-99A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTMIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSLDSSSVVFGCGTKLTVL
901	ABL-CD3-100A	NFMLTQPHSVSESPGKTVTIACTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNQVFGCGTKLTVL
902	ABL-CD3-101A	NFMLTQPHSVSESPGKTVTISCTRSNGSITSNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDNSNRVFGCKTKLTVL
903	ABL-CD3-102A	DIQMTQSPSTLSASVGDRVTITCRASQSISNWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFANYYC QQYKSYSWTFGCGTKVEIK
904	ABL-CD3-103A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
905	ABL-CD3-104A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL

906	ABL-CD3-105A	DIQMTQSPSTLSASVGDRVTITCRASQSIGSWLAWYQQKPGKA PKLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYNSYSWTFGCGTKVEIK
907	ABL-CD3-106A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASKYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSNNRVFGCGTKLTVL
908	ABL-CD3-107A	DIVMTQTPLSSPVTPGQPASISCRSSQSLVHSDGNTYLNWLQQR PGQPPRLLIYKISDRFSGVPDRFSGSGAGTDFTLKIGRVEAEDVG VYYCMQSTQFPITFGCGTRLEIK
909	ABL-CD3-108A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFDNSNRVFGCGTKLTVL
910	ABL-CD3-109A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTSVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDRSNRVFGCGTKLTVL
911	ABL-CD3-110A	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAP VLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTHSSGNHRVFGCGTKLTVL
912	ABL-CD3-111A	SYELTQPPSVSVSPGQTARITCSGDALPKQYTYWCQQKPGQAP VLVIYKDSERPSGIPERFSGSSSGTTVTLTISGVQAEDEADYYCQ SADSSGTYRVFGCGTKLTVL
913	ABL-CD3-112A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNHRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY FCQSFDSSNRVFGCGTKLTVL
914	ABL-CD3-113A	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSFYSSNRVFGCGTELTVL

Table 1E. VH Sequences

SEQ ID NO:	Name	Sequence
Heavy Chain Variable Region Sequences		
915	ABL-CD3-1	EVQLVESGGGLVKPGGSLRLSCAASGFTLSSYSMNWVRQAPG KGLEWVSSISRSGSYIYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREKWELLYFDYWGQGTLVTVSS
916	ABL-CD3-2	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISRSTSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARGSRDAFDIWGQGTMVTVSS
917	ABL-CD3-3	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSYISRSSNYIHYADSVKGRFTIFRDNAKNSLYLQMNS LRVEDTAVYYCARAERGSYAVDIWGQGTMVTVSS
918	ABL-CD3-4	VQLVESGGGLVKPGGSLRLSCAASGFTFSSYNMNWVRQAPGK GLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSLR AEDTAVFYCARAERGSYAFDIWGQGTMVTVSS
919	ABL-CD3-5	EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLEWVSYISSSSSSIYYADSVKGRFTISRDNAKNSLYLQMNSL RDEDTAVYYCARDRRATLDYWGQGTLVTVSS
920	ABL-CD3-6	EVQLVDSGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISSRGSYRNYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCARDRRELLLDCWGQGTLVTVSS

921	ABL-CD3-7	EVQLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLKWVSSISSSGSYKYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREPPTLGMDYWGQGTLVTVSS
922	ABL-CD3-8	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISSSSSYIYYADSVKGRFTISRANAKNSLYLQMSSL RAEDTAVYYCARDRRELLLDYWGQGTLVTVSS
923	ABL-CD3-9	EVQLVDSGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSVNSRGSYIYYADSVKGRFTISRDNAKNSLYLQMNS LRADDTAVYYCARDRRELLLDYWGQGTLVTVSS
924	ABL-CD3-10	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSCNSVAWNWIRQSP SRGLEWLGRTYYRSKWHNEYAVSVKSRINIKPDTSKNQVSLQL KSVTPEDTAVYYCARERKWELFLDYWGQGTLVTVSS
925	ABL-CD3-11	QVTLKESGPGILQPSQTLSLTCSFSGFSLSTFGMGVGWIRQPSG KGLEWLAHIWWDDDKYYNPALKSRLTISKDTSKNQVFLKIAN VDTADTATYYCARLGYYPYWFFDVWGTGTTVTVSS
926	ABL-CD3-12	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYTMNWVRQAPG KGLEWVSSISRSSSYKYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREPPTLGMDYWGQGTLVIVSS
927	ABL-CD3-13	EVQLVESGGGLVQPGGSLRLSCAASGFTFSNYWMSWVRQAPG KGLEWVANIKEDGSEKYYVDSVKGRFTISRDNAKNSLYLQMN SLTAEDTSVYYCARERRTGYFDYWGQGTLVTVSS
928	ABL-CD3-14	EVQLVESGGGLVKPGGSLRLSCAASGFTCSSYSMTWVRQAPG KGLEWVSSISRRSSYIYYADSVKGRFTISRDNAKNSLYLQLNSL RAEDTAVYYCARERWELLYFDYWGQGTLVTVSS
929	ABL-CD3-15	EVQLVESGGGLVKPGGSLRLSCAASGFNCSSYSMNWVRQAPG KGLEWVSSISRSSNYIYYADSVKGRFSISRDDAKNSLYLQMNSL RAEDTAVYYCARERWIQLYSDYWGQGILVTVSS
930	ABL-CD3-16	EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYWMTWVRQAPG KGLEWVANIKEDGSEKYCVDSVKGRFTISRDNAKNSLYLQLNS LRAEDTAVYYCARERRTGYFDYWGQGTLVTVSS
931	ABL-CD3-17	EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYSINWVRQAPGK GLEWVSYISSSSSTIYYADSVKGRFTISRDNAKNSLYLQMNSLR DEDTAVYYCARERWELLYFDYWGQGTLVTVSS
932	ABL-CD3-18	EVQLVESGEGLVQPGGSLRLSCAASGFTFSSYAMHWVRQAPG KGLEYVSAISSNGGRTYYADSVKGRFTISRDNSKNTLYLQMGS LRAEDMAVYYCARGGSLDYWGQGTLVTVSS
933	ABL-CD3-19	EVQLVESGGGLVKPGGSLRLSCAASGFTLSSYSMNWVRQAPG KGLEWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARERWELLYFDYWGQGTLVTVSS
934	ABL-CD3-20	EVQLVESGGGLVKPGGSLRLSCAASGLTFSTYSMNWVRQAPG KGLEWVSSISSSGSYVYYADSVKGRFTMSRDNAKNSLYLQMN SLRAEDTAVYYCARERRELLFDYWGQGTLVTVSS
935	ABL-CD3-21	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISRSSSYIYYADSVKGRFTLSRDNAKNSLYLQMNS LRGEDTAIYYCGRDGKGAIFLDYWGQGTLVTVSS
936	ABL-CD3-22	EVQLVESGGGLVQPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSYISSSSSTIYYADSVKGRFTISRDNAKNSLYLQMNSL RDEDTAVYYCARDGPVDYGMDVWGQGTTVTVSS
937	ABL-CD3-23	EVHLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISSSSTYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREPRTLGMDYWGQGILVTVSS
938	ABL-CD3-24	EVQLVESGGGLVKPGGSLRLSCVASGFTFSSYTMNWVRQAPG KGLEWVSSISRSGSYKYNADSVKGRFTISRDNAKNSLYLQMNS LRVEDTAVYYCAREPPTLGMDYWGQGTLVTVSS

939	ABL-CD3-25	EVHLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISSSSTYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREPRTLGMDYWGQGILVTVSS
940	ABL-CD3-26	EVHLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISSSSTYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREPRTLGMDYWGQGILVTVSS
941	ABL-CD3-27	QVQLVQSGAEVKKPGASLKVSCKASGYTFTSYYMHWVRQAP GQGLEWMGIINPSNGNTISAQKFQGRVTMTRDTSTSTVYMEM SSLRSEDTAVYYCVRCWGYYVMDVWGQGTTVTVSS
942	ABL-CD3-28	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSVAWNWIRQSP SRGLEWLGRTYYRSKWYNECAGSVKSRITINPDTSKNQFSLQL NSVTPEDTAIYYCARERKWELFLDYWGQGTLVTVSS
943	ABL-CD3-29	EVQLVQSGAEVKKPGESLKISCKGSGYSFISYWIAWVRQMPGK GLEWMGIIYPGDSETRYRPSFQGQVTISADKSINTAYLQWSSLK AADTAMYYCARQGAYDGFDIWGQGTMVTVSS
944	ABL-CD3-30	QVQLQESGPGLVKPSETLSLTCTVSGGSINSYYWSWIRQSPGK GLEWIGHIYYSGRTKYNPSLKSRVTISVDTSKNQFSLKLSSVTA ADTAVYYSARENRNGAFDIWGQGTVVTVSS
945	ABL-CD3-31	EVQLVQSGAEVKKPGESLKISCKGSGYSFTNYWIGWVRQMPG KGLEWMGIIYPADSDTTYSPSFQGQVTISADKSITTAYLQWSSL KASDTAMYYCARHGGSYILDAFDIWGQGTMVTVSS
946	ABL-CD3-32	EVQLVESGGGLVKPGGSLRLSCEASGFTFSSYNMNWVRQAPG KGLEWVSSISSSSSYIYYTDSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARAERGSYAFDFWGQGTMVTVSS
947	ABL-CD3-33	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREPPTLGMDYWGQGTLVTVSS
948	ABL-CD3-34	EVHLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLEWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREPRTLGMDYWGQGILVTVSS
949	ABL-CD3-35	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSVNSRGSYIYYADSVKGRFTISRDNAKDSLYLQMNS LRADDTAVYYCARDRRELLLDYWGQGTLVTVSS
950	ABL-CD3-36	EVQLVESGGGLVQRGGSLRLSCAASGFTFSNYWMSWVRQAPG KGLEWVANIKEDGSEKYCVDSVKGRFTISRDNAKHSLYLQMN SLRAEDTAVYYCARERRTGYFDYWGQGTLVTVSS
951	ABL-CD3-37	EVQLVESGGGLVQPGGSLRLSCAASGFSFSSYSMNWVRQAPG KGLEWVSHIRSSTYSIYYADSVMGRFTISRDNAKNSLYLQMNS LRDEDTAVYFCARAKTGGDAFDIWGQGTMVTVSS
952	ABL-CD3-38	QGQLQQWGAGLLKPSETLSLTCAVYGGSFSGYYWSWIRLPPG KGLEWIGEINHSGNTNYNPSLKSRVTISVDTSKNQFSLQLSSVT AADTAVYYCAKEVEIWGYFDYWGQGTLVTVSS
953	ABL-CD3-39	EVQLLESGGGLVQPGGSLRLSCAASGFTFSYYAMSWVRQAPG KGLEWVSAISGSGGSTYYADSVKGRFTISRDNSKNTLYLQMNS LRAEDTAVYYCAKEGIVGARAEYFQHWGQGTLVTVSS
954	ABL-CD3-40	EVQLLESGGGLVQPGGSLRLSCAASGFTFSYYAMSWVRQAPG KGLEWVSAISGSGGSTYYADSVKGRFTISRDNSKNTLYLQMNS LRAEDTAVYYCAKEGIVGARAEYFQHWGQGTLVTVSS
955	ABL-CD3-41	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSVNSRGSYIYYADSVKGRFTISRDNAKDSLYLQMNS LRADDTAVYYCARDRRELLLDYWGQGTLVTVSS
956	ABL-CD3-42	EVQLVESGGGLVQPGGSLRLSCAASGFTFKSYSINWVRQAPGK GLEWVSYISSSSSTIYYADSVKGRFTISRDNAKNSLYLQMNSLR DEDTAVYYCARDGPVDYGMDVWGQGTTVTVSS

957	ABL-CD3-43	EVQLVQSGAEVKKPGESLKISCKGSEYSFTTYWIAWVRQMPG KGLEWMGIIYPGDSDTTYSPSFQGQVTISADKSISIAFLQWSSLK ASDTAMYYCARQGELDAFDIWGQGTMVTVSS
958	ABL-CD3-44	EVQLVESGGGLVQPGGSLRLSCAASGFTFSTYWMSWVRQAPG KGLEWVANIKQDGSEKYYVDSVKGRFTISRDNAKNSLYLQMN SLRAEDTAVYYCATGSFDYWGQGTLVTVSS
959	ABL-CD3-45	EVQLVESGGGLVQPGGSLRLSCAASGFTFSSYWMSWVRQAPG KGLEWVANIKEDGSEKYYVDSVKGRFTISRDNAKNSLYLQMN SLRAEDTAVYYCARERRTGYLDYWGQGTLVTVSS
960	ABL-CD3-46	EVQLVESGGGLVKPGGSLRLSCSASGFTFSTYTMNWVRQAPG KGLDWVSSISKSSTYIYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCARERRTLAFDIWGQGTMVTVSS
961	ABL-CD3-47	EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLEWVSYISRSSTTIYYADSVKGRFTISRDNAKNSLYLQMNSL RDEDAAVYYCARERWELLYFDYWGQGTLVTVSS
962	ABL-CD3-48	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYTMNWVRQAPG KGLEWVSSISGSGSYIYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREPPTLGMDYWGQGTLVTVSS
963	ABL-CD3-49	EVQLVESGGGLVKPGGSLRLSCSASGFTFSTYTMNWVRQAPG KGLEWVSSISKSSSYIYYTDSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARERRTLAFDIWGQGTMVTVSS
964	ABL-CD3-50	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSVAWNWIRQSP SRGLEWLGRTYSRSKWYNDYAVSVKSRITINPDTSKNQFSLEL NSVTPEDTAVYYCARERKWELFLDYWGQGTLVTVSS
965	ABL-CD3-51	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARERWELLYFDYWGQGTLVTVSS
966	ABL-CD3-52	EVQLVESGGGLVKPGGSLRLSCAASGFTFSYYSMNWVRQAPG KGLEWVSSISRSTTYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARDGKGAIFLDYWGQGTLVTVSS
967	ABL-CD3-53	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYTMNWVRQAPG KGLEWVSSITTSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARVTFDAFDIWGQGTMVTVSS
968	ABL-CD3-54	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISRSSRYIFYADSVRGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREKRELLFDYWGQGTLVTVSS
969	ABL-CD3-55	EVQLVESGGGLVKPGGSLRLSCAASGFTFSIYSMNWVRQAPGK GLEWVSSISSGSSYIYYADSVKGRFTISRDNAKSSLFLQMNSLR AEDTAVYYCAREKRELLFDYWGQGTLVTVSS
970	ABL-CD3-56	EVQLVESGGGLVKPGGSLRLSCVASGFTFSRYSMNWVRQAPG KGLEWVSSISSSSRYTYYADSLKGRFIMSRDNAKNSLFLQMNS LRAEDTAVYYCARNLYNALDYWGQGTLVTVSS
971	ABL-CD3-57	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYTMNWVRQAPG KGLEWVSSISTSSRYIYYTDSVKGRFTISRDDAKNSLYLQMNSL RAEDTAVYYCTRNWGYDVFDIWGQGTMVIVSS
972	ABL-CD3-58	EVQLVESGGGLVKPGGSLRLSCVVSGFTFSNYNMNWVRQAPG KGLEWVSSSSRSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAIYYCAREKWELLFFDYWGQGTLVTVSS
973	ABL-CD3-59	EVQLVESGGGLVKPGGSLRLSCTASGFTLSSYSMNWVRQAPG KGLEWVSSLSRSSNYIYYAVSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCARERWELLYFDYWGQGTLVTVSS
974	ABL-CD3-60	EVQLVESGGGLVKPGGSLRLSCAASGFTFSIYSMNWVRQAPGK GLEWVSSISSGSSYIYYADSVKGRFTISRDNAKSSLFLQMNSLR AEDTAVYYCAREKRELLFDYWGQGTLVTVSS

975	ABL-CD3-61	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISRSGTYIYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCARERWELLYFDYWGQGTLVTVSS
976	ABL-CD3-62	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISRSSGYIFYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCVRERVGAGFDYWGQGTLVTVSS
977	ABL-CD3-63	QVQLQESGPGLVKPSETLSLTCTVSGGSISSYYWSWIRQPAGK GLEWIGRIYTSGSTKYNPSLKSRVTMSVDTSKNQFSLKLISVTA ADTAVYFCARERIRDLYFDYWGQGTLVTVSS
978	ABL-CD3-64	EVQVAESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLEWVSSISSSGSYTYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCVRERGKGAGMDVWGQGTTVTVSS
979	ABL-CD3-65	QVQLQQWGAGLLKPSETLSLTCAVYGGSFSGYYWSWIRQPPG KGLEWIGEINHSGSTNYNPSLKSRVTISVDTSKNQFSLKLSSVT AADTAVYYCAREYYYYGMDVWGQGTTVTVSS
980	ABL-CD3-66	QVQLQESGPGLVKPSETLSLTCTVSGGSISSYYWSWIRQPAGK GLEWIGRIYASGSTYYNPSLKSRVTMSVDTSKNQFSLKLSSVTA ADTAVYYCAREKRSRLYFDYWGQGTLVTVSS
981	ABL-CD3-67	EVQLVESGGGLVKPGGSLRLSCAASGFTVSSYSMNWVRQAPG KGLEWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLFLQMNSL RAEDTAVYYCARERWELLYFDYWGQGTLVTVSS
982	ABL-CD3-68	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSSIMNWVRQAPGK GLEWVSSISGSSSYIYYADSVKGRFTISRDNAKNSQYLQMKSLR AEDTAVYYCARERWNLLYFDYWGQGTLVTVSS
983	ABL-CD3-69	EVQLVESGGGLVKPGGSLRLSCAASGFTFSTYTMNWVRQAPG KGLEWVSTITSSSRYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARVTFDAFDIWGQGTMVTVSS
984	ABL-CD3-70	EVQLVESGGGLVKPGGSLRLSCAASGFTFSTYIMNWVRQAPG KGLEWVSSITSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREKWELLFFDYWGQGTLVTVSS
985	ABL-CD3-71	QVQLQESGPGLVKPSETLSLTCTVSGGSINSYYWSWIRQPAGK GLEWIGRIYTSGSTNYNPSLKSRVTMSVDTSKKQFSLKLSSVTA ADTAVYYCARERISRLYFDYWGQGILVTVSS
986	ABL-CD3-72	EVQLVESGGGLVKPGGSLRLSCAASGFTFSTYIMNWVRQAPG KGLEWVSSISSSRSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREDRYRLFFDYWGQGTLVTVSS
987	ABL-CD3-73	EVQLVESGGGLVKPGGSLRLSCAASGFTITSYSMNWVRQAPG KGLEWVSTFSRSSTYIYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREKWDLLYFDYWGQGTLVTVSS
988	ABL-CD3-74	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMKWVRQAPG KGLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARDRGELTLWYWGQGTLVTVSS
989	ABL-CD3-75	EVQLVESGGGLVKPGGSLRLSCAASGFTFSTYSLNWVRQAPGK GLEWVSSISVSSRYIYFADSVKGRFTISRDNAKNSLYLQMNSLR AEDTAVYYCARDRRELLLDYWGQGTLVTVSS
990	ABL-CD3-76	EVQLVESGGGLVKPGGSLRLSCAASGFTFSNYYMNWVRQAPG KGLERVSSISSSSNYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARDRRELPLDYWGQGTVVTVSS
991	ABL-CD3-77	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARDGELGIGTYFDYWGQGTLVTVSS
992	ABL-CD3-78	EVQLVESGGGLVKPGGSLRLSCAASGFTVSNYSMNWVRQAPG KGLEWVSCISRSSSYIYYADSVKGRFTISRDNAKNSLFLQMNSL RAEDTAVYYCARERWELLYFDYWGQGTLVTVSS

993	ABL-CD3-79	EVQLVESGGGLVKPGGSLRLSCAASGFTVSNYSMNWVRQAPG KGLEWVSCISRSSSYIYYADSVKGRFTISRDNAKNSLFLQMNSL RAEDTAVYYCARERWELLYFDYWGQGTLVTVSS
994	ABL-CD3-80	EVQLVESGGGLVKPGGSLRLSCAASGFTFSGYSMNWVRQAPG KGLEWVSSISSRSRYIYYADSVQGRFTISRDNSKNSLFLQMNSL RAEDTAVYYCGRDWRELLLDYWGQGTLVTVSS
995	ABL-CD3-81	QVQLQESGPGLVKPSQTLSLTCTVSGGSISSGGYYWSWIRQHP GKGLEWIGYIYYSGSTYYNPSLKSRVTISVDTSKDQFSLKLSSV TAADTAVYYCARERKTSLPFDIWGQGTMVTVSS
996	ABL-CD3-82	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARDRRELLLDYWGQGTLVTVSS
997	ABL-CD3-83	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSTISRSGGYIYDADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCARDFNWTFDNWGQGTLVTVSS
998	ABL-CD3-84	EVQLVESGGGLVKPGGSLRLSCAASGFTFSNFIMNWVRQAPGK GLEWVSSISGSSNYIYYADSVKGRFTISGDNAKNSLYLQMNSL RAEDTAVYYCAREKWVLLFFDYWGQGTLVTVSS
999	ABL-CD3-85	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISRRSGYIYYADSVKGRFTLSRDNAKKSLYLQMNS LRAEDTAVYYCARDLNWAFDYWGQGTLVTVSS
1000	ABL-CD3-86	EVQLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLEWVSTISRSSRYIYYGDSVKGRFTISRDNAKNSLLLQMNSL RAEDTAVYYCARDHNWSFDYWGKGILVTVSS
1001	ABL-CD3-87	EVQLVESGGGLVKFGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLEWVSSISSSSSYKYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREGGNSHGMDVWGQGTTVTVSS
1002	ABL-CD3-88	EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYWMSWVRQAPG KGLEWVANIKEDGSEKYYVDSVKGRFTISRDNAKNSLYLQMN SLRAEDTAVYFCARERRTGYFDYWGQGTLVTVSS
1003	ABL-CD3-89	EVQLVESGGGLVQPGGSLRLSCAASGFTFSSYWMSWVRQAPG KGLEWVSSISSRRGYKYHADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCARVPYSGSYFDYWGQGTLVTVSS
1004	ABL-CD3-90	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCTNYRYNWNDYWGQGTLVTVSS
1005	ABL-CD3-91	EVQLVESGGGLVKPGGSLRLSCAASGFTFSYYSMNWVRQAPG KGLEWVSSISSSSTYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCANYRYNWNDYWGQGTLVTVSS
1006	ABL-CD3-92	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSYISSSSRYIYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREGPNWGTHAFDIWGQGTMVTVSS
1007	ABL-CD3-93	EVQLVESGGALVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCANYRYNWNDYWGQGTLVAVSS
1008	ABL-CD3-94	EVQLVESGGGLVKPGGSLRLSCSASGFTFSSYSMNWVRQAPG KGLEWVSSISRSSSYIFYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARERRNGFDYWGQGTLVTVSS
1009	ABL-CD3-95	EVQLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLEWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCANYRYNWNDYWGQGTLVTVSS
1010	ABL-CD3-96	EVQLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARAVYNYFDQWGQGTLVTVSS

1011	ABL-CD3-97	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSYISRSSTYIYYADSMKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREGPNWGTHAFDIWGQGTMVTVSS
1012	ABL-CD3-98	EVQLVESGGGLVKPGGSLRLSCAASGLTFSSYSMNWVRQAPG KGLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARERRELAFDIWGQGTMVTVSS
1013	ABL-CD3-99	EVQLVESGGGLVKPGGSLRLSCAASGITFSSYSMNWVRQAPGK GLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLHLQMNSLR AEDTAVYYCARERRELSFDYWGQGTLVTVSS
1014	ABL-CD3-100	EVQLVESGRGLVNPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSYISSSSNYIYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREGPNWGTHAFDIWGQGTMVTVSS
1015	ABL-CD3-101	EVQLVESGGGLVNPGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCANYRYNWNDYWGQGTLVTVSS
1016	ABL-CD3-102	EVQLVESGGGLVKPGGSLRLSCAASGITFSSYSMNWVRQAPGK GLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLHLQMHSLR AEDTAVYYCARERRELSFDYWGQGTLVTVSS
1017	ABL-CD3-103	EVQLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLEWVSSISSSSSYISYADSVKGRFTISRDNAKNSLFLQMNSL RAEDTAVYYCARVSYNSFDYWGQGTLVTVSS
1018	ABL-CD3-104	EVQLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARAVYNYFDQWGQGTLVTVSS
1019	ABL-CD3-105	EVQLVESGGGLVNPGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCANYRYNWNDYWGQGTLVTVSS
1020	ABL-CD3-106	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISRSSSYIFYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARERRNGFDYWGQGTLVTVSS
1021	ABL-CD3-107	EVQLVQSGAEVKKPGESLRISCKGSGYSFTTYWIAWVRQMPG KGLEWMGFIYPGDSDTIYSPSFQGQVTISADKSISTAYLQWSSL RASDTAMYYCARQGYLDAFDIWGQGTMVTVSS
1022	ABL-CD3-108	EVQLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KGLEWVSSISSSSRYIYYADSVKGRFTISRDNANNSLYLHMNSL RAEDTAVYYCARALYNYFDYWGQGTLVTVSS
1023	ABL-CD3-109	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCANYRYNWNDYWGQGTLVTVSS
1024	ABL-CD3-110	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARERRDLAFDIWGQGTMVTVSS
1025	ABL-CD3-111	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KGLEWVSYISRSSTYIYYADSMKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREGPNWGTHAFDIWGQGTMVTVSS
1026	ABL-CD3-112	EVQLVESGGGLVKPGGSLRLSCAASGITFSSYSMNWVRQAPGK GLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLHLQMNSLR AEDTAVYYCARERRELSFDYWGQGTLVTVSS
1027	ABL-CD3-113	EVQLVESGGGLVKPGGSLRLSCAASGITFSSYSMNWVRQAPGK GLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLHLQMHSLR AEDTAVYYCARERRELSFDYWGQGTLVTVSS
1028	ABL-CD3-1A	EVQLVESGGGLVKPGGSLRLSCAASGFTLSSYSMNWVRQAPG KCLEWVSSISRSGSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREKWELLYFDYWGQGTLVTVSS

1029	ABL-CD3-2A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISRSTSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARGSRDAFDIWGQGTMVTVSS
1030	ABL-CD3-3A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSYISRSSNYIHYADSVKGRFTIFRDNAKNSLYLQMNS LRVEDTAVYYCARAERGSYAVDIWGQGTMVTVSS
1031	ABL-CD3-4A	VQLVESGGGLVKPGGSLRLSCAASGFTFSSYNMNWVRQAPGK CLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSLR AEDTAVFYCARAERGSYAFDIWGQGTMVTVSS
1032	ABL-CD3-5A	EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLEWVSYISSSSSSIYYADSVKGRFTISRDNAKNSLYLQMNSL RDEDTAVYYCARDRRATLDYWGQGTLVTVSS
1033	ABL-CD3-6A	EVQLVDSGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISSRGSYRNYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCARDRRELLLDCWGQGTLVTVSS
1034	ABL-CD3-7A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLKWVSSISSSGSYKYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREPPTLGMDYWGQGTLVTVSS
1035	ABL-CD3-8A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISSSSSYIYYADSVKGRFTISRANAKNSLYLQMSSL RAEDTAVYYCARDRRELLLDYWGQGTLVTVSS
1036	ABL-CD3-9A	EVQLVDSGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSVNSRGSYIYYADSVKGRFTISRDNAKNSLYLQMNS LRADDTAVYYCARDRRELLLDYWGQGTLVTVSS
1037	ABL-CD3-10A	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSCNSVAWNWIRQSP SRCLEWLGRTYYRSKWHNEYAVSVKSRINIKPDTSKNQVSLQL KSVTPEDTAVYYCARERKWELFLDYWGQGTLVTVSS
1038	ABL-CD3-11A	QVTLKESGPGILQPSQTLSLTCSFSGFSLSTFGMGVGWIRQPSG KCLEWLAHIWWDDDKYYNPALKSRLTISKDTSKNQVFLKIAN VDTADTATYYCARLGYYPYWFFDVWGTGTTVTVSS
1039	ABL-CD3-12A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYTMNWVRQAPG KCLEWVSSISRSSSYKYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREPPTLGMDYWGQGTLVIVSS
1040	ABL-CD3-13A	EVQLVESGGGLVQPGGSLRLSCAASGFTFSNYWMSWVRQAPG KCLEWVANIKEDGSEKYYVDSVKGRFTISRDNAKNSLYLQMN SLTAEDTSVYYCARERRTGYFDYWGQGTLVTVSS
1041	ABL-CD3-14A	EVQLVESGGGLVKPGGSLRLSCAASGFTCSSYSMTWVRQAPG KCLEWVSSISRRSSYIYYADSVKGRFTISRDNAKNSLYLQLNSL RAEDTAVYYCARERWELLYFDYWGQGTLVTVSS
1042	ABL-CD3-15A	EVQLVESGGGLVKPGGSLRLSCAASGFNCSSYSMNWVRQAPG KCLEWVSSISRSSNYIYYADSVKGRFSISRDDAKNSLYLQMNSL RAEDTAVYYCARERWIQLYSDYWGQGILVTVSS
1043	ABL-CD3-16A	EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYWMTWVRQAPG KCLEWVANIKEDGSEKYCVDSVKGRFTISRDNAKNSLYLQLNS LRAEDTAVYYCARERRTGYFDYWGQGTLVTVSS
1044	ABL-CD3-17A	EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYSINWVRQAPGK CLEWVSYISSSSSTIYYADSVKGRFTISRDNAKNSLYLQMNSLR DEDTAVYYCARERWELLYFDYWGQGTLVTVSS
1045	ABL-CD3-18A	EVQLVESGEGLVQPGGSLRLSCAASGFTFSSYAMHWVRQAPG KCLEYVSAISSNGGRTYYADSVKGRFTISRDNSKNTLYLQMGS LRAEDMAVYYCARGGSLDYWGQGTLVTVSS
1046	ABL-CD3-19A	EVQLVESGGGLVKPGGSLRLSCAASGFTLSSYSMNWVRQAPG KCLEWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARERWELLYFDYWGQGTLVTVSS

1047	ABL-CD3-20A	EVQLVESGGGLVKPGGSLRLSCAASGLTFSTYSMNWVRQAPG KCLEWVSSISSSGSYVYYADSVKGRFTMSRDNAKNSLYLQMN SLRAEDTAVYYCARERRELLFDYWGQGTLVTVSS
1048	ABL-CD3-21A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISRSSSYIYYADSVKGRFTLSRDNAKNSLYLQMNS LRGEDTAIYYCGRDGKGAIFLDYWGQGTLVTVSS
1049	ABL-CD3-22A	EVQLVESGGGLVQPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSYISSSSSTIYYADSVKGRFTISRDNAKNSLYLQMNSL RDEDTAVYYCARDGPVDYGMDVWGQGTTVTVSS
1050	ABL-CD3-23A	EVHLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISSSSTYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREPRTLGMDYWGQGILVTVSS
1051	ABL-CD3-24A	EVQLVESGGGLVKPGGSLRLSCVASGFTFSSYTMNWVRQAPG KCLEWVSSISRSGSYKYNADSVKGRFTISRDNAKNSLYLQMNS LRVEDTAVYYCAREPPTLGMDYWGQGTLVTVSS
1052	ABL-CD3-25A	EVHLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISSSSTYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREPRTLGMDYWGQGILVTVSS
1053	ABL-CD3-26A	EVHLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISSSSTYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREPRTLGMDYWGQGILVTVSS
1054	ABL-CD3-27A	QVQLVQSGAEVKKPGASLKVSCKASGYTFTSYYMHWVRQAP GQCLEWMGIINPSNGNTISAQKFQGRVTMTRDTSTSTVYMEMS SLRSEDTAVYYCVRSWGYYVMDVWGQGTTVTVSS
1055	ABL-CD3-28A	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSVAWNWIRQSP SRCLEWLGRTYYRSKWYNECAGSVKSRITINPDTSKNQFSLQL NSVTPEDTAIYYCARERKWELFLDYWGQGTLVTVSS
1056	ABL-CD3-29A	EVQLVQSGAEVKKPGESLKISCKGSGYSFISYWIAWVRQMPGK CLEWMGIIYPGDSETRYRPSFQGQVTISADKSINTAYLQWSSLK AADTAMYYCARQGAYDGFDIWGQGTMVTVSS
1057	ABL-CD3-30A	QVQLQESGPGLVKPSETLSLTCTVSGGSINSYYWSWIRQSPGKC LEWIGHIYYSGRTKYNPSLKSRVTISVDTSKNQFSLKLSSVTAA DTAVYYSARENRNGAFDIWGQGTVVTVSS
1058	ABL-CD3-31A	EVQLVQSGAEVKKPGESLKISCKGSGYSFTNYWIGWVRQMPG KCLEWMGIIYPADSDTTYSPSFQGQVTISADKSITTAYLQWSSL KASDTAMYYCARHGGSYILDAFDIWGQGTMVTVSS
1059	ABL-CD3-32A	EVQLVESGGGLVKPGGSLRLSCEASGFTFSSYNMNWVRQAPG KCLEWVSSISSSSSYIYYTDSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARAERGSYAFDFWGQGTMVTVSS
1060	ABL-CD3-33A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREPPTLGMDYWGQGTLVTVSS
1061	ABL-CD3-34A	EVHLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLEWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREPRTLGMDYWGQGILVTVSS
1062	ABL-CD3-35A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSVNSRGSYIYYADSVKGRFTISRDNAKDSLYLQMNS LRADDTAVYYCARDRRELLLDYWGQGTLVTVSS
1063	ABL-CD3-36A	EVQLVESGGGLVQRGGSLRLSCAASGFTFSNYWMSWVRQAPG KCLEWVANIKEDGSEKYYVDSVKGRFTISRDNAKHSLYLQMN SLRAEDTAVYYCARERRTGYFDYWGQGTLVTVSS
1064	ABL-CD3-37A	EVQLVESGGGLVQPGGSLRLSCAASGFSFSSYSMNWVRQAPG KCLEWVSHIRSSTYSIYYADSVMGRFTISRDNAKNSLYLQMNS LRDEDTAVYFCARAKTGGDAFDIWGQGTMVTVSS

1065	ABL-CD3-38A	QGQLQQWGAGLLKPSETLSLTCAVYGGSFSGYYWSWIRLPPG KCLEWIGEINHSGNTNYNPSLKSRVTISVDTSKNQFSLQLSSVT AADTAVYYCAKEVEIWGYFDYWGQGTLVTVSS
1066	ABL-CD3-39A	EVQLLESGGGLVQPGGSLRLSCAASGFTFSYYAMSWVRQAPG KCLEWVSAISGSGGSTYYADSVKGRFTISRDNSKNTLYLQMNS LRAEDTAVYYCAKEGIVGARAEYFQHWGQGTLVTVSS
1067	ABL-CD3-40A	EVQLLESGGGLVQPGGSLRLSCAASGFTFSYYAMSWVRQAPG KCLEWVSAISGSGGSTYYADSVKGRFTISRDNSKNTLYLQMNS LRAEDTAVYYCAKEGIVGARAEYFQHWGQGTLVTVSS
1068	ABL-CD3-41A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSVNSRGSYIYYADSVKGRFTISRDNAKDSLYLQMNS LRADDTAVYYCARDRRELLLDYWGQGTLVTVSS
1069	ABL-CD3-42A	EVQLVESGGGLVQPGGSLRLSCAASGFTFKSYSINWVRQAPGK CLEWVSYISSSSSTIYYADSVKGRFTISRDNAKNSLYLQMNSLR DEDTAVYYCARDGPVDYGMDVWGQGTTVTVSS
1070	ABL-CD3-43A	EVQLVQSGAEVKKPGESLKISCKGSEYSFTTYWIAWVRQMPG KCLEWMGIIYPGDSDTTYSPSFQGQVTISADKSISIAFLQWSSLK ASDTAMYYCARQGELDAFDIWGQGTMVTVSS
1071	ABL-CD3-44A	EVQLVESGGGLVQPGGSLRLSCAASGFTFSTYWMSWVRQAPG KCLEWVANIKQDGSEKYYVDSVKGRFTISRDNAKNSLYLQMN SLRAEDTAVYYCATGSFDYWGQGTLVTVSS
1072	ABL-CD3-45A	EVQLVESGGGLVQPGGSLRLSCAASGFTFSSYWMSWVRQAPG KCLEWVANIKEDGSEKYYVDSVKGRFTISRDNAKNSLYLQMN SLRAEDTAVYYCARERRTGYLDYWGQGTLVTVSS
1073	ABL-CD3-46A	EVQLVESGGGLVKPGGSLRLSCSASGFTFSTYTMNWVRQAPG KCLDWVSSISKSSTYIYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCARERRTLAFDIWGQGTMVTVSS
1074	ABL-CD3-47A	EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLEWVSYISRSSTTIYYADSVKGRFTISRDNAKNSLYLQMNSL RDEDAAVYYCARERWELLYFDYWGQGTLVTVSS
1075	ABL-CD3-48A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYTMNWVRQAPG KCLEWVSSISGSGSYIYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREPPTLGMDYWGQGTLVTVSS
1076	ABL-CD3-49A	EVQLVESGGGLVKPGGSLRLSCSASGFTFSTYTMNWVRQAPG KCLEWVSSISKSSSYIYYTDSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARERRTLAFDIWGQGTMVTVSS
1077	ABL-CD3-50A	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSVAWNWIRQSP SRCLEWLGRTYSRSKWYNDYAVSVKSRITINPDTSKNQFSLEL NSVTPEDTAVYYCARERKWELFLDYWGQGTLVTVSS
1078	ABL-CD3-51A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARERWELLYFDYWGQGTLVTVSS
1079	ABL-CD3-52A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSYYSMNWVRQAPG KCLEWVSSISRSTTYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARDGKGAIFLDYWGQGTLVTVSS
1080	ABL-CD3-53A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYTMNWVRQAPG KCLEWVSSITTSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARVTFDAFDIWGQGTMVTVSS
1081	ABL-CD3-54A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISRSSRYIFYADSVRGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREKRELLFDYWGQGTLVTVSS
1082	ABL-CD3-55A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSIYSMNWVRQAPGK CLEWVSSISSGSSYIYYADSVKGRFTISRDNAKSSLFLQMNSLR AEDTAVYYCAREKRELLFDYWGQGTLVTVSS

1083	ABL-CD3-56A	EVQLVESGGGLVKPGGSLRLSCVASGFTFSRYSMNWVRQAPG KCLEWVSSISSSSRYTYYADSLKGRFIMSRDNAKNSLFLQMNS LRAEDTAVYYCARNLYNALDYWGQGTLVTVSS
1084	ABL-CD3-57A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYTMNWVRQAPG KCLEWVSSISTSSRYIYYTDSVKGRFTISRDDAKNSLYLQMNSL RAEDTAVYYCTRNWGYDVFDIWGQGTMVIVSS
1085	ABL-CD3-58A	EVQLVESGGGLVKPGGSLRLSCVVSGFTFSNYNMNWVRQAPG KCLEWVSSSSRSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAIYYCAREKWELLFFDYWGQGTLVTVSS
1086	ABL-CD3-59A	EVQLVESGGGLVKPGGSLRLSCTASGFTLSSYSMNWVRQAPG KCLEWVSSLSRSSNYIYYAVSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCARERWELLYFDYWGQGTLVTVSS
1087	ABL-CD3-60A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSIYSMNWVRQAPGK CLEWVSSISSGSSYIYYADSVKGRFTISRDNAKSSLFLQMNSLR AEDTAVYYCAREKRELLFDYWGQGTLVTVSS
1088	ABL-CD3-61A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISRSGTYIYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCARERWELLYFDYWGQGTLVTVSS
1089	ABL-CD3-62A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISRSSGYIFYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCVRERVGAGFDYWGQGTLVTVSS
1090	ABL-CD3-63A	QVQLQESGPGLVKPSETLSLTCTVSGGSISSYYWSWIRQPAGKC LEWIGRIYTSGSTKYNPSLKSRVTMSVDTSKNQFSLKLISVTAA DTAVYFCARERIRDLYFDYWGQGTLVTVSS
1091	ABL-CD3-64A	EVQVAESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLEWVSSISSSGSYTYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCVRERGKGAGMDVWGQGTTVTVSS
1092	ABL-CD3-65A	QVQLQQWGAGLLKPSETLSLTCAVYGGSFSGYYWSWIRQPPG KCLEWIGEIQHSGSTNYNPSLKSRVTISVDTSKNQFSLKLSSVT AADTAVYYCAREYYYYGMDVWGQGTTVTVSS
1093	ABL-CD3-66A	QVQLQESGPGLVKPSETLSLTCTVSGGSISSYYWSWIRQPAGKC LEWIGRIYASGSTYYNPSLKSRVTMSVDTSKNQFSLKLSSVTAA DTAVYYCAREKRSRLYFDYWGQGTLVTVSS
1094	ABL-CD3-67A	EVQLVESGGGLVKPGGSLRLSCAASGFTVSSYSMNWVRQAPG KCLEWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLFLQMNSL RAEDTAVYYCARERWELLYFDYWGQGTLVTVSS
1095	ABL-CD3-68A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSSIMNWVRQAPGK CLEWVSSISGSSSYIYYADSVKGRFTISRDNAKNSQYLQMKSLR AEDTAVYYCARERWNLLYFDYWGQGTLVTVSS
1096	ABL-CD3-69A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSTYTMNWVRQAPG KCLEWVSTITSSSRYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARVTFDAFDIWGQGTMVTVSS
1097	ABL-CD3-70A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSTYIMNWVRQAPG KCLEWVSSITSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREKWELLFFDYWGQGTLVTVSS
1098	ABL-CD3-71A	QVQLQESGPGLVKPSETLSLTCTVSGGSINSYYWSWIRQPAGK CLEWIGRIYTSGSTNYNPSLKSRVTMSVDTSKKQFSLKLSSVTA ADTAVYYCARERISRLYFDYWGQGILVTVSS
1099	ABL-CD3-72A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSTYIMNWVRQAPG KCLEWVSSISSSRSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREDRYRLFFDYWGQGTLVTVSS
1100	ABL-CD3-73A	EVQLVESGGGLVKPGGSLRLSCAASGFTITSYSMNWVRQAPG KCLEWVSTFSRSSTYIYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREKWDLLYFDYWGQGTLVTVSS

1101	ABL-CD3-74A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMKWVRQAPG KCLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARDRGELTLWYWGQGTLVTVSS
1102	ABL-CD3-75A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSTYSLNWVRQAPGK CLEWVSSISVSSRYIYFADSVKGRFTISRDNAKNSLYLQMNSLR AEDTAVYYCARDRRELLLDYWGQGTLVTVSS
1103	ABL-CD3-76A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSNYYMNWVRQAPG KCLERVSSISSSSNYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARDRRELPLDYWGQGTVVTVSS
1104	ABL-CD3-77A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARDGELGIGTYFDYWGQGTLVTVSS
1105	ABL-CD3-78A	EVQLVESGGGLVKPGGSLRLSCAASGFTVSNYSMNWVRQAPG KCLEWVSCISRSSSYIYYADSVKGRFTISRDNAKNSLFLQMNSL RAEDTAVYYCARERWELLYFDYWGQGTLVTVSS
1106	ABL-CD3-79A	EVQLVESGGGLVKPGGSLRLSCAASGFTVSNYSMNWVRQAPG KCLEWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLFLQMNSL RAEDTAVYYCARERWELLYFDYWGQGTLVTVSS
1107	ABL-CD3-80A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSGYSMNWVRQAPG KCLEWVSSISSRSRYIYYADSVQGRFTISRDNSKNSLFLQMNSL RAEDTAVYYCGRDWRELLLDYWGQGTLVTVSS
1108	ABL-CD3-81A	QVQLQESGPGLVKPSQTLSLTCTVSGGSISSGGYYWSWIRQHP GKCLEWIGYIYYSGSTYYNPSLKSRVTISVDTSKDQFSLKLSSV TAADTAVYYCARERKTSLPFDIWGQGTMVTVSS
1109	ABL-CD3-82A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARDRRELLLDYWGQGTLVTVSS
1110	ABL-CD3-83A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSTISRSGGYIYDADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCARDFNWTFDNWGQGTLVTVSS
1111	ABL-CD3-84A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSNFIMNWVRQAPGK CLEWVSSISGSSNYIYYADSVKGRFTISGDNAKNSLYLQMNSL RAEDTAVYYCAREKWVLLFFDYWGQGTLVTVSS
1112	ABL-CD3-85A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISRRSGYIYYADSVKGRFTLSRDNAKKSLYLQMNS LRAEDTAVYYCARDLNWAFDYWGQGTLVTVSS
1113	ABL-CD3-85B	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISRRSGYIYYADSVKGRFTLSRDNAKKSLYLQMNS LRAEDTAVYYCARDLNWAFDYWGQGTLVTVSS
1114	ABL-CD3-86A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLEWVSTISRSSRYIYYGDSVKGRFTISRDNAKNSLLLQMNSL RAEDTAVYYCARDHNWSFDYWGKGILVTVSS
1115	ABL-CD3-87A	EVQLVESGGGLVKFGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLEWVSSISSSSSYKYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREGGNSHGMDVWGQGTTVTVSS
1116	ABL-CD3-88A	EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYWMSWVRQAPG KCLEWVANIKEDGSEKYYVDSVKGRFTISRDNAKNSLYLQMN SLRAEDTAVYFCARERRTGYFDYWGQGTLVTVSS
1117	ABL-CD3-89A	EVQLVESGGGLVQPGGSLRLSCAASGFTFSSYWMSWVRQAPG KCLEWVSSISSRRGYKYHADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCARVPYSGSYFDYWGQGTLVTVSS
1118	ABL-CD3-90A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCTNYRYNWNDYWGQGTLVTVSS

1119	ABL-CD3-91A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSYYSMNWVRQAPG KCLEWVSSISSSSTYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCANYRYNWNDYWGQGTLVTVSS
1120	ABL-CD3-92A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSYISSSSRYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCAREGPNWGTHAFDIWGQGTMVTVSS
1121	ABL-CD3-93A	EVQLVESGGALVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCANYRYNWNDYWGQGTLVAVSS
1122	ABL-CD3-94A	EVQLVESGGGLVKPGGSLRLSCSASGFTFSSYSMNWVRQAPG KCLEWVSSISRSSSYIFYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARERRNGFDYWGQGTLVTVSS
1123	ABL-CD3-95A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLEWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCANYRYNWNDYWGQGTLVTVSS
1124	ABL-CD3-96A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARAVYNYFDQWGQGTLVTVSS
1125	ABL-CD3-97A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSYISRSSTYIYYADSMKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREGPNWGTHAFDIWGQGTMVTVSS
1126	ABL-CD3-98A	EVQLVESGGGLVKPGGSLRLSCAASGLTFSSYSMNWVRQAPG KCLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARERRELAFDIWGQGTMVTVSS
1127	ABL-CD3-99A	EVQLVESGGGLVKPGGSLRLSCAASGITFSSYSMNWVRQAPGK CLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLHLQMNSLR AEDTAVYYCARERRELSFDYWGQGTLVTVSS
1128	ABL-CD3-100A	EVQLVESGRGLVNPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSYISSSSNYIYYADSVKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREGPNWGTHAFDIWGQGTMVTVSS
1129	ABL-CD3-101A	EVQLVESGGGLVNPGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCANYRYNWNDYWGQGTLVTVSS
1130	ABL-CD3-102A	EVQLVESGGGLVKPGGSLRLSCAASGITFSSYSMNWVRQAPGK CLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLHLQMHSLR AEDTAVYYCARERRELSFDYWGQGTLVTVSS
1131	ABL-CD3-103A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLEWVSSISSSSSYISYADSVKGRFTISRDNAKNSLFLQMNSL RAEDTAVYYCARVSYNSFDYWGQGTLVTVSS
1132	ABL-CD3-104A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARAVYNYFDQWGQGTLVTVSS
1133	ABL-CD3-105A	EVQLVESGGGLVNPGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCANYRYNWNDYWGQGTLVTVSS
1134	ABL-CD3-106A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISRSSSYIFYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARERRNGFDYWGQGTLVTVSS
1135	ABL-CD3-107A	EVQLVQSGAEVKKPGESLRISCKGSGYSFTTYWIAWVRQMPG KCLEWMGFIYPGDSDTIYSPSFQGQVTISADKSISTAYLQWSSL RASDTAMYYCARQGYLDAFDIWGQGTMVTVSS
1136	ABL-CD3-108A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPG KCLEWVSSISSSSRYIYYADSVKGRFTISRDNANNSLYLHMNSL RAEDTAVYYCARALYNYFDYWGQGTLVTVSS

1137	ABL-CD3-109A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCANYRYNWNDYWGQGTLVTVSS
1138	ABL-CD3-110A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCARERRDLAFDIWGQGTMVTVSS
1139	ABL-CD3-111A	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPG KCLEWVSYISRSSTYIYYADSMKGRFTISRDNAKNSLYLQMNS LRAEDTAVYYCAREGPNWGTHAFDIWGQGTMVTVSS
1140	ABL-CD3-112A	EVQLVESGGGLVKPGGSLRLSCAASGITFSSYSMNWVRQAPGK CLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLHLQMNSLR AEDTAVYYCARERRELSFDYWGQGTLVTVSS
1141	ABL-CD3-113A	EVQLVESGGGLVKPGGSLRLSCAASGITFSSYSMNWVRQAPGK CLEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLHLQMHSLR AEDTAVYYCARERRELSFDYWGQGTLVTVSS

Table 1F. scFv Sequences

SEQ ID NO:	Name	Sequence
Full scFv sequence		
1155	ABL-CD3-18A_scFv_VH-VL	EVQLVESGEGLVQPGGSLRLSCAASGFTFSSYAMHWVRQAPGKCL EYVSAISSNGGRTYYADSVKGRFTISRDNSKNTLYLQMGSLRAED MAVYYCARGGSLDYWGQGTLVTVSSGGGGSGGGGSGGGGSGGG GSDIVMTQTPLSSPVTPGQPASISCRSSQSLVHSDGNTYLNWLQQR PGQPPRLLIYKISDRFSGVPDRFSGSGAGTDFTLKIGRVEAEDVGVY YCMQSTQFPITFGCGTRLEIK
1156	ABL-CD3-20A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGLTFSTYSMNWVRQAPGKCL EWVSSISSSGSYVYYADSVKGRFTMSRDNAKNSLYLQMNSLRAED TAVYYCARERRELLFDYWGQGTLVTVSSGGGGSGGGGSGGGGSG GGGSNFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPG SSPTSVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYY CQSYDRSNRVFGCGTKLTVL
1157	ABL-CD3-21A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCL EWVSSISRSSSYIYYADSVKGRFTLSRDNAKNSLYLQMNSLRGEDT AIYYCGRDGKGAIFLDYWGQGTLVTVSSGGGGSGGGGSGGGGSG GGGSSYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQ APVLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYCY STHSSGNHRVFGCGTKLTVL
1158	ABL-CD3-22A_scFv_VH-VL	EVQLVESGGGLVQPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCL EWVSYISSSSSTIYYADSVKGRFTISRDNAKNSLYLQMNSLRDEDT AVYYCARDGPVDYGMDVWGQGTTVTVSSGGGGSGGGGSGGGGS GGGGSSYELTQPPSVSVSPGQTARITCSGDALPKQYTYWYQQKPG QAPVLVIYKDSERPSGIPERFSGSSSGTTVTLTISGVQAEDEADYYC QSADSSGTYRVFGCGTKLTVL
1159	ABL-CD3-27A_scFv_VH-VL	QVQLVQSGAEVKKPGASLKVSCKASGYTFTSYYMHWVRQAPGQ CLEWMGIINPSNGNTISAQKFQGRVTMTRDTSTSTVYMEMSSLRSE DTAVYYCVRSWGYYVMDVWGQGTTVTVSSGGGGSGGGGSGGG GSGGGGSQTVVTQEPSFSVSPGGTVTLTCGLNSGSVSTSYYPSWYQ QTPGQTPRTLIYSTNTRSSGVPDRFSGSILGNKAALTITGAQADDES DYYCVLYMGSGIWVFGCGTKLTVL

SEQ ID NO:	Name	Sequence
1160	ABL-CD3-29A_scFv_VH-VL	EVQLVQSGAEVKKPGESLKISCKGSGYSFISYWIAWVRQMPGKCL EWMGIIYPGDSETRYRPSFQGQVTISADKSINTAYLQWSSLKAADT AMYYCARQGAYDGFDIWGQGTMVTVSSGGGGSGGGGSGGGGSG GGGSQSVLTQPPSASGTPGQRVTISCSGSSSNIGSNYVYWYQQLPG TAPKLLIYSNNQRPSGVPDRFSGSKSGTSASLAISGLRSEDEADYYC EAWDDSLSGPVFGCGTKLTVL
1161	ABL-CD3-31A_scFv_VH-VL	EVQLVQSGAEVKKPGESLKISCKGSGYSFTNYWIGWVRQMPGKCL EWMGIIYPADSDTTYSPSFQGQVTISADKSITTAYLQWSSLKASDT AMYYCARHGGSYILDAFDIWGQGTMVTVSSGGGGSGGGGSGGG GSGGGGSDIVMTQSPLSLPVTPGEPASISCRSSQSLLHSNGYNYLD WYLQKPGQSPQLLIYLGSNRASGVPDRFSGSGSGTDFTLKISRVEA EDVGFYYCMQPLQTPYTFGCGTKLEIK
1162	ABL-CD3-34A_scFv_VH-VL	EVHLVESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPGKCL EWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDT AVYYCAREPRTLGMDYWGQGILVTVSSGGGGSGGGGSGGGGSGG GGSNFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGS SPTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYYC QSYDSSNRVFGCGTKLTVL
1163	ABL-CD3-36A_scFv_VH-VL	EVQLVESGGGLVQRGGSLRLSCAASGFTFSNYWMSWVRQAPGKC LEWVANIKEDGSEKYYVDSVKGRFTISRDNAKHSLYLQMNSLRAE DTAVYYCARERRTGYFDYWGQGTLVTVSSGGGGSGGGGSGGGG SGGGGSDIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWFQQKT GKAPKLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYISYSWTFGCGTKVEIK
1164	ABL-CD3-37A_scFv_VH-VL	EVQLVESGGGLVQPGGSLRLSCAASGFSFSSYSMNWVRQAPGKCL EWVSHIRSSTYSIYYADSVMGRFTISRDNAKNSLYLQMNSLRDEDT AVYFCARAKTGGDAFDIWGQGTMVTVSSGGGGSGGGGSGGGGS GGGGSDIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPG KAPKLLIHKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQ QYNSYWTFGCGTKVEIK
1165	ABL-CD3-39A_scFv_VH-VL	EVQLLESGGGLVQPGGSLRLSCAASGFTFSYYAMSWVRQAPGKCL EWVSAISGSGGSTYYADSVKGRFTISRDNSKNTLYLQMNSLRAED TAVYYCAKEGIVGARAEYFQHWGQGTLVTVSSGGGGSGGGGSGG GGSGGGGSDVVMTQSPLSLPVTLGQPASISCRSSQSLVYSDGNTYL TWFQQRPGQSPRRLIYKVSNRDSGVPDRFSGSGSGTDFTLKISRVE AEDVEIYYCMQGTHWPLTFGCGTKVEIK
1166	ABL-CD3-40A_scFv_VH-VL	EVQLLESGGGLVQPGGSLRLSCAASGFTFSYYAMSWVRQAPGKCL EWVSAISGSGGSTYYADSVKGRFTISRDNSKNTLYLQMNSLRAED TAVYYCAKEGIVGARAEYFQHWGQGTLVTVSSGGGGSGGGGSGG GGSGGGGSQSVLTQPPSASGTPGQRVTISCSGSSSNIGSNTVNWYQ QFPGTAPKLLIYSNNQRPSGVPDRFSGSKSGTSASLAISGLQSEDEA DYYCAPWDDSLNGVVFGCGTKLTVL
1167	ABL-CD3-41A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCL EWVSSVNSRGSYIYYADSVKGRFTISRDNAKDSLYLQMNSLRADD TAVYYCARDRRELLLDYWGQGTLVTVSSGGGGSGGGGSGGGGSG GGGSSYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQ APVLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYCY STDSSGNHSWVFGCGTKLTVL

SEQ ID NO:	Name	Sequence
1168	ABL-CD3-43A_scFv_VH-VL	EVQLVQSGAEVKKPGESLKISCKGSEYSFTTYWIAWVRQMPGKCL EWMGIIYPGDSDTTYSPSFQGQVTISADKSISIAFLQWSSLKASDTA MYYCARQGELDAFDIWGQGTMVTVSSGGGGSGGGGSGGGGSGG GGSQSALTQPASVSGSPGQSITISCTGTSSDVGSYNLVSWYQQHPG KAPKLMIYEDIRRPSGVSNRFSASKSGDTASLTISGLQAEDEADYY CSSYAGSTTFAIFGCGTKLTVL
1169	ABL-CD3-44A_scFv_VH-VL	EVQLVESGGGLVQPGGSLRLSCAASGFTFSTYWMSWVRQAPGKC LEWVANIKQDGSEKYYVDSVKGRFTISRDNAKNSLYLQMNSLRAE DTAVYYCATGSFDYWGQGTLVTVSSGGGGSGGGGSGGGGSGGG GSQPVLTQPSSHSASSGASVRLTCMLSSGFSVGDFWIRWYQQKPG NPPRYLLFYHSDSNKGQGSGVPSRFSGSNDASANAGILRISGLQPE DEADYYCGTWHSNSKTWVFGCGTKLTVL
1170	ABL-CD3-45A_scFv_VH-VL	EVQLVESGGGLVQPGGSLRLSCAASGFTFSSYWMSWVRQAPGKC LEWVANIKEDGSEKYYVDSVKGRFTISRDNAKNSLYLQMNSLRAE DTAVYYCARERRTGYLDYWGQGTLVTVSSGGGGSGGGGSGGGG SGGGGSDIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKP GKAPNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYKSYSWTIGCGTKVEIK
1171	ABL-CD3-47A_scFv_VH-VL	EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYSMNWVRQAPGKCL EWVSYISRSSTTIYYADSVKGRFTISRDNAKNSLYLQMNSLRDEDA AVYYCARERWELLYFDYWGQGTLVTVSSGGGGSGGGGSGGGGS GGGGSNFMLTQPHSVSESPGKTVTISCTRSSGSIASKYVQWYQQRP GSSPTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYYSNNRVFGCGTKLTVL
1172	ABL-CD3-49A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCSASGFTFSTYTMNWVRQAPGKCL EWVSSISKSSSYIYYTDSVKGRFTISRDNAKNSLYLQMNSLRAEDT AVYYCARERRTLAFDIWGQGTMVTVSSGGGGSGGGGSGGGGSGG GGSNFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGS SPTTVIYEDNQRSSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYYC QSYDRSNRVFGCGTKLTVL
1173	ABL-CD3-52A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTFSYYSMNWVRQAPGKC LEWVSSISRSTTYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAED TAVYYCARDGKGAIFLDYWGQGTLVTVSSGGGGSGGGGSGGGGS GGGGSSYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSG QAPVLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYC YSTDSSGNHRVFGCGTKLTVL
1174	ABL-CD3-53A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYTMNWVRQAPGKCL EWVSSITTSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDT AVYYCARVTFDAFDIWGQGTMVTVSSGGGGSGGGGSGGGGSGG GGSNFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGS SPTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYYC QSYDSSNRVFGCGTKLTVL
1175	ABL-CD3-56A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCVASGFTFSRYSMNWVRQAPGKCL EWVSSISSSSRYTYYADSLKGRFIMSRDNAKNSLFLQMNSLRAEDT AVYYCARNLYNALDYWGQGTLVTVSSGGGGSGGGGSGGGGSGG GGSFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSP TTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLQTEDEADYYCQ SYDSSNRVFGCGTKLTVL

SEQ ID NO:	Name	Sequence
1176	ABL-CD3-57A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYTMNWVRQAPGKCL EWVSSISTSSRYIYYTDSVKGRFTISRDDAKNSLYLQMNSLRAEDT AVYYCTRNWGYDVFDIWGQGTMVIVSSGGGGSGGGGSGGGGSG GGGSQPVLTQPSSHSASSGASVRLTCMLSSGFSVGDFWIRWYQQK PGNPPRYLLYYHSDSNKGQGSGVPSRFSGSNDASANAGILRISGLQ PEDEADYYCGTWHSNSKTQVFGCGTKLTVL
1177	ABL-CD3-61A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCL EWVSSISRSGTYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDT AVYYCARERWELLYFDYWGQGTLVTVSSGGGGSGGGGSGGGGS GGGGSQTVVTQEPSLTVSPGGTVTLTCASSTGAVTSGYYPNWFQQ KPGQAPRALIYSTSNKHSWTPARFSGSLLGGKAALTLSGVQPEDEA EYYCLLYYGGAYVFGCGTKVTVL
1178	ABL-CD3-62A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCL EWVSSISRSSGYIFYADSVKGRFTISRDNAKNSLYLQMNSLRAEDT AVYYCVRERVGAGFDYWGQGTLVTVSSGGGGSGGGGSGGGGSG GGGSNFMLTQPHSVSESPGKTVAISCTRSSGSIASNYVQWYQQRPG SSPTAVIYEDNQRPSGVPDRFSGSIDSSSNSAFLTISGLKTEDEADYY CQSYDSSNRVFGCGTKLTVL
1179	ABL-CD3-63A_scFv_VH-VL	QVQLQESGPGLVKPSETLSLTCTVSGGSISSYYWSWIRQPAGKCLE WIGRIYTSGSTKYNPSLKSRVTMSVDTSKNQFSLKLISVTAADTAV YFCARERIRDLYFDYWGQGTLVTVSSGGGGSGGGGSGGGGSGGG GSNFMLTQPHSVSESPGKTVTISCTRTSGSIASNYVQWYQQRPGSS PTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEAAYYC QSYDRSNRVFGCGTKLTVL
1180	ABL-CD3-64A_scFv_VH-VL	EVQVAESGGGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPGKC LEWVSSISSSGSYTYYADSVKGRFTISRDNAKNSLYLQMNSLRAED TAVYYCVRERGKGAGMDVWGQGTTVTVSSGGGGSGGGGSGGGG SGGGGSNFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQR PGSSPTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEAD YYCQSYDSSNRVFGCGTKLTVL
1181	ABL-CD3-65A_scFv_VH-VL	QVQLQQWGAGLLKPSETLSLTCAVYGGSFSGYYWSWIRQPPGKC LEWIGEIQHSGSTNYNPSLKSRVTISVDTSKNQFSLKLSSVTAADTA VYYCAREYYYYGMDVWGQGTTVTVSSGGGGSGGGGSGGGGSGG GGSQSVLTQPPSASGTPGQRVTISCSGSSSNIGSNYVYWYQQLPGT APKLLIYSNNQRPSGVPDRFSGSKSGTSASLAISGLRSEDEADYYCA AWDDSLSGVVFGCGTKLTVL
1182	ABL-CD3-66A_scFv_VH-VL	QVQLQESGPGLVKPSETLSLTCTVSGGSISSYYWSWIRQPAGKCLE WIGRIYASGSTYYNPSLKSRVTMSVDTSKNQFSLKLSSVTAADTAV YYCAREKRSRLYFDYWGQGTLVTVSSGGGGSGGGGSGGGGSGGG GSNFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSP TTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEGDYYCQ SYDRSNRVFGCGTKLTVL
1183	ABL-CD3-68A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSSIMNWVRQAPGKCL EWVSSISGSSSYIYYADSVKGRFTISRDNAKNSQYLQMKSLRAEDT AVYYCARERWNLLYFDYWGQGTLVTVSSGGGGSGGGGSGGGGS GGGGSSYELTQPPSVSVSPGQTARITCSGDALPKQYAYWYQQKPG QAPVLVIYKDSERPSGIPERFSGSSSGTTVTLTISGVQAEDEADYYC QSADSSGTYVVFGCGTKLTVL

SEQ ID NO:	Name	Sequence
1184	ABL-CD3-71A_scFv_VH-VL	QVQLQESGPGLVKPSETLSLTCTVSGGSINSYYWSWIRQPAGKCLE WIGRIYTSGSTNYNPSLKSRVTMSVDTSKKQFSLKLSSVTAADTAV YYCARERISRLYFDYWGQGILVTVSSGGGGSGGGGSGGGGSGGG GSNFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSP TTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYYCQ SYDRSNRVFGCGTKLTVL
1185	ABL-CD3-72A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTFSTYIMNWVRQAPGKCL EWVSSISSSRSYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDT AVYYCAREDRYRLFFDYWGQGTLVTVSSGGGGSGGGGSGGGGSG GGGSNFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPG SSPTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYY CQSYDSSNRVFGCGTKLTVL
1186	ABL-CD3-74A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMKWVRQAPGKCL EWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDT AVYYCARDRGELTLWYWGQGTLVTVSSGGGGSGGGGSGGGGSG GGGSSYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQ APVLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYCY STDSSGNHWVFGCGTKLTVL
1187	ABL-CD3-76A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTFSNYYMNWVRQAPGKC LERVSSISSSSNYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDT AVYYCARDRRELPLDYWGQGTVVTVSSGGGGSGGGGSGGGGSG GGGSSYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQ APVLVIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYCY STDSSGNHWVFGCGTKLTVL
1188	ABL-CD3-77A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCL EWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDT AVYYCARDGELGIGTYFDYWGQGTLVTVSSGGGGSGGGGSGGGG SGGGGSQSVLTQPPSVSGAPGQRVTISCTGSSSNIGAGYDVHWYQ QLPGTAPKLLIYGNSNRPSGVPDRFSGSKSGTSASLAITGLQAEDEA DYYCQSYDSSLSGSVFGCGTKLTVL
1189	ABL-CD3-79A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTVSNYSMNWVRQAPGKC LEWVSSISRSSSYIYYADSVKGRFTISRDNAKNSLFLQMNSLRAEDT AVYYCARERWELLYFDYWGQGTLVTVSSGGGGSGGGGSGGGGS GGGGSQTVVTQEPSFSVSPGGTVTLTCGLSSGSVSTSYYPSWYQQT PGQAPRTLIYSTNTRSSGVPDRFSGSILGNKAALTITGAQADDESDY YCVLYMGSGIWVFGCGTKLTVL
1190	ABL-CD3-81A_scFv_VH-VL	QVQLQESGPGLVKPSQTLSLTCTVSGGSISSGGYYWSWIRQHPGKC LEWIGYIYYSGSTYYNPSLKSRVTISVDTSKDQFSLKLSSVTAADTA VYYCARERKTSLPFDIWGQGTMVTVSSGGGGSGGGGSGGGGSGG GGSNFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGS SPTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEAYYYC QSFDSSNRVFGCGTKLTVL
1191	ABL-CD3-85A_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCL EWVSSISRRSGYIYYADSVKGRFTLSRDNAKKSLYLQMNSLRAED TAVYYCARDLNWAFDYWGQGTLVTVSSGGGGSGGGGSGGGGSG GGGSNFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPG SSPTTVIYEDNHRPSGVPDRFSGSIDSSSNSASLTIAGLKTEDEADYY CQSYDSSNVVFGCGTKLTVL

SEQ ID NO:	Name	Sequence
1192	ABL-CD3-85B_scFv_VH-VL	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCL EWVSSISRRSGYIYYADSVKGRFTLSRDNAKKSLYLQMNSLRAED TAVYYCARDLNWAFDYWGQGTLVTVSSGGGGSGGGGSGGGGSG GGGSNFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPG SSPTTVIYEDNHRPSGVPDRFSGSIDSSSNSASLTIAGLKTEDEADYY CQSSDSSNVVFGCGTKLTVL
1193	ABL-CD3-87A_scFv_VH-VL	EVQLVESGGGLVKFGGSLRLSCAASGFTFSRYSMNWVRQAPGKCL EWVSSISSSSSYKYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDT AVYYCAREGGNSHGMDVWGQGTTVTVSSGGGGSGGGGSGGGGS GGGGSNFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRP GSSPTTVIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADY YCQSYDSSNRVFGCGTKLTVL
1194	ABL-CD3-88A_scFv_VH-VL	EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYWMSWVRQAPGKC LEWVANIKEDGSEKYYVDSVKGRFTISRDNAKNSLYLQMNSLRAE DTAVYFCARERRTGYFDYWGQGTLVTVSSGGGGSGGGGSGGGGS GGGGSDIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPG KAPNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQ QYNSYSWTFGCGTKVEIK
1195	ABL-CD3-89A_scFv_VH-VL	EVQLVESGGGLVQPGGSLRLSCAASGFTFSSYWMSWVRQAPGKC LEWVSSISSRRGYKYHADSVKGRFTISRDNAKNSLYLQMNSLRAE DTAVYYCARVPYSGSYFDYWGQGTLVTVSSGGGGSGGGGSGGG GSGGGGSEIVLTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQ KPGQAPRLLIYGASSRATGIPDRFSGSGSGTDFTLTISRLAPEDFAV YYCQQYGSSRWSFGCGTKVEIK
1196	ABL-CD3-18A_scFv_VL-VH	DIVMTQTPLSSPVTPGQPASISCRSSQSLVHSDGNTYLNWLQQRPG QPPRLLIYKISDRFSGVPDRFSGSGAGTDFTLKIGRVEAEDVGVYYC MQSTQFPITFGCGTRLEIKGGGGSGGGGSGGGGSGGGGSEVQLVE SGEGLVQPGGSLRLSCAASGFTFSSYAMHWVRQAPGKCLEYVSAI SSNGGRTYYADSVKGRFTISRDNSKNTLYLQMGSLRAEDMAVYY CARGGSLDYWGQGTLVTVSS
1197	ABL-CD3-20A_scFv_VL-VH	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSPTS VIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYYCQSY DRSNRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESG GGLVKPGGSLRLSCAASGLTFSTYSMNWVRQAPGKCLEWVSSISS SGSYVYYADSVKGRFTMSRDNAKNSLYLQMNSLRAEDTAVYYCA RERRELLFDYWGQGTLVTVSS
1198	ABL-CD3-21A_scFv_VL-VH	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAPVL VIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYCYSTHS SGNHRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESG GGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCLEWVSSISR SSSYIYYADSVKGRFTLSRDNAKNSLYLQMNSLRGEDTAIYYCGR DGKGAIFLDYWGQGTLVTVSS
1199	ABL-CD3-22A_scFv_VL-VH	SYELTQPPSVSVSPGQTARITCSGDALPKQYTYWYQQKPGQAPVL VIYKDSERPSGIPERFSGSSSGTTVTLTISGVQAEDEADYYCQSADS SGTYRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESG GGLVQPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCLEWVSYISS SSSTIYYADSVKGRFTISRDNAKNSLYLQMNSLRDEDTAVYYCAR DGPVDYGMDVWGQGTTVTVSS

SEQ ID NO:	Name	Sequence
1200	ABL-CD3-27A_scFv_VL-VH	QTVVTQEPSFSVSPGGTVTLTCGLNSGSVSTSYYPSWYQQTPGQTP RTLIYSTNTRSSGVPDRFSGSILGNKAALTITGAQADDESDYYCVL YMGSGIWVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSQVQLV QSGAEVKKPGASLKVSCKASGYTFTSYYMHWVRQAPGQCLEWM GIINPSNGNTISAQKFQGRVTMTRDTSTSTVYMEMSSLRSEDTAVY YCVRSWGYYVMDVWGQGTTVTVSS
1201	ABL-CD3-29A_scFv_VL-VH	QSVLTQPPSASGTPGQRVTISCSGSSSNIGSNYVYWYQQLPGTAPK LLIYSNNQRPSGVPDRFSGSKSGTSASLAISGLRSEDEADYYCEAW DDSLSGPVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVQ SGAEVKKPGESLKISCKGSGYSFISYWIAWVRQMPGKCLEWMGIIY PGDSETRYRPSFQGQVTISADKSINTAYLQWSSLKAADTAMYYCA RQGAYDGFDIWGQGTMVTVSS
1202	ABL-CD3-31A_scFv_VL-VH	DIVMTQSPLSLPVTPGEPASISCRSSQSLLHSNGYNYLDWYLQKPG QSPQLLIYLGSNRASGVPDRFSGSGSGTDFTLKISRVEAEDVGFYYC MQPLQTPYTFGCGTKLEIKGGGGSGGGGSGGGGSGGGGSEVQLV QSGAEVKKPGESLKISCKGSGYSFTNYWIGWVRQMPGKCLEWMG IIYPADSDTTYSPSFQGQVTISADKSITTAYLQWSSLKASDTAMYYC ARHGGSYILDAFDIWGQGTMVTVSS
1203	ABL-CD3-34A_scFv_VL-VH	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSPTT VIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYYCQSY DSSNRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVHLVESG GGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPGKCLEWVSSISR SSSYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYYCAR EPRTLGMDYWGQGILVTVSS
1204	ABL-CD3-36A_scFv_VL-VH	DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWFQQKTGKAPKL LIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYISY SWTFGCGTKVEIKGGGGSGGGGSGGGGSGGGGSEVQLVESGGGL VQRGGSLRLSCAASGFTFSNYWMSWVRQAPGKCLEWVANIKEDG SEKYYVDSVKGRFTISRDNAKHSLYLQMNSLRAEDTAVYYCARER RTGYFDYWGQGTLVTVSS
1205	ABL-CD3-37A_scFv_VL-VH	DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKL LIHKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYNS YWTFGCGTKVEIKGGGGSGGGGSGGGGSGGGGSEVQLVESGGGL VQPGGSLRLSCAASGFSFSSYSMNWVRQAPGKCLEWVSHIRSSTY SIYYADSVMGRFTISRDNAKNSLYLQMNSLRDEDTAVYFCARAKT GGDAFDIWGQGTMVTVSS
1206	ABL-CD3-39A_scFv_VL-VH	DVVMTQSPLSLPVTLGQPASISCRSSQSLVYSDGNTYLTWFQQRPG QSPRRLIYKVSNRDSGVPDRFSGSGSGTDFTLKISRVEAEDVEIYYC MQGTHWPLTFGCGTKVEIKGGGGSGGGGSGGGGSGGGGSEVQLL ESGGGLVQPGGSLRLSCAASGFTFSYYAMSWVRQAPGKCLEWVS AISGSGGSTYYADSVKGRFTISRDNSKNTLYLQMNSLRAEDTAVY YCAKEGIVGARAEYFQHWGQGTLVTVSS
1207	ABL-CD3-40A_scFv_VL-VH	QSVLTQPPSASGTPGQRVTISCSGSSSNIGSNTVNWYQQFPGTAPKL LIYSNNQRPSGVPDRFSGSKSGTSASLAISGLQSEDEADYYCAPWD DSLNGVVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLLES GGGLVQPGGSLRLSCAASGFTFSYYAMSWVRQAPGKCLEWVSAIS GSGGSTYYADSVKGRFTISRDNSKNTLYLQMNSLRAEDTAVYYCA KEGIVGARAEYFQHWGQGTLVTVSS

SEQ ID NO:	Name	Sequence
1208	ABL-CD3-41A_scFv_VL-VH	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAPVL VIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYCYSTDS SGNHSWVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVES GGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCLEWVSSV NSRGSYIYYADSVKGRFTISRDNAKDSLYLQMNSLRADDTAVYYC ARDRRELLLDYWGQGTLVTVSS
1209	ABL-CD3-43A_scFv_VL-VH	QSALTQPASVSGSPGQSITISCTGTSSDVGSYNLVSWYQQHPGKAP KLMIYEDIRRPSGVSNRFSASKSGDTASLTISGLQAEDEADYYCSSY AGSTTFAIFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVQS GAEVKKPGESLKISCKGSEYSFTTYWIAWVRQMPGKCLEWMGIIY PGDSDTTYSPSFQGQVTISADKSISIAFLQWSSLKASDTAMYYCAR QGELDAFDIWGQGTMVTVSS
1210	ABL-CD3-44A_scFv_VL-VH	QPVLTQPSSHSASSGASVRLTCMLSSGFSVGDFWIRWYQQKPGNPP RYLLFYHSDSNKGQGSGVPSRFSGSNDASANAGILRISGLQPEDEA DYYCGTWHSNSKTWVFGCGTKLTVLGGGGSGGGGSGGGGSGGG GSEVQLVESGGGLVQPGGSLRLSCAASGFTFSTYWMSWVRQAPG KCLEWVANIKQDGSEKYYVDSVKGRFTISRDNAKNSLYLQMNSL RAEDTAVYYCATGSFDYWGQGTLVTVSS
1211	ABL-CD3-45A_scFv_VL-VH	DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPNL LIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYKS YSWTIGCGTKVEIKGGGGSGGGGSGGGGSGGGGSEVQLVESGGG LVQPGGSLRLSCAASGFTFSSYWMSWVRQAPGKCLEWVANIKED GSEKYYVDSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYYCAR ERRTGYLDYWGQGTLVTVSS
1212	ABL-CD3-47A_scFv_VL-VH	NFMLTQPHSVSESPGKTVTISCTRSSGSIASKYVQWYQQRPGSSPTT VIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYYCQSY YSNNRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESG GGLVQPGGSLRLSCAASGFTFSRYSMNWVRQAPGKCLEWVSYISR SSTTIYYADSVKGRFTISRDNAKNSLYLQMNSLRDEDAAVYYCAR ERWELLYFDYWGQGTLVTVSS
1213	ABL-CD3-49A_scFv_VL-VH	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSPTT VIYEDNQRSSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYYCQSY DRSNRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESG GGLVKPGGSLRLSCSASGFTFSTYTMNWVRQAPGKCLEWVSSISK SSSYIYYTDSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYYCAR ERRTLAFDIWGQGTMVTVSS
1214	ABL-CD3-52A_scFv_VL-VH	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAPVL VIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYCYSTDS SGNHRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESG GGLVKPGGSLRLSCAASGFTFSYYSMNWVRQAPGKCLEWVSSISR STTYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYYCAR DGKGAIFLDYWGQGTLVTVSS
1215	ABL-CD3-53A_scFv_VL-VH	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSPTT VIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYYCQSY DSSNRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESG GGLVKPGGSLRLSCAASGFTFSSYTMNWVRQAPGKCLEWVSSITT SSSYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYYCAR VTFDAFDIWGQGTMVTVSS

SEQ ID NO:	Name	Sequence
1216	ABL-CD3-56A_scFv_VL-VH	FMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSPTTV IYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLQTEDEADYYCQSYD SSNRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESGG GLVKPGGSLRLSCVASGFTFSRYSMNWVRQAPGKCLEWVSSISSSS RYTYYADSLKGRFIMSRDNAKNSLFLQMNSLRAEDTAVYYCARN LYNALDYWGQGTLVTVSS
1217	ABL-CD3-57A_scFv_VL-VH	QPVLTQPSSHSASSGASVRLTCMLSSGFSVGDFWIRWYQQKPGNPP RYLLYYHSDSNKGQGSGVPSRFSGSNDASANAGILRISGLQPEDEA DYYCGTWHSNSKTQVFGCGTKLTVLGGGGSGGGGSGGGGSGGG GSEVQLVESGGGLVKPGGSLRLSCAASGFTFSSYTMNWVRQAPGK CLEWVSSISTSSRYIYYTDSVKGRFTISRDDAKNSLYLQMNSLRAE DTAVYYCTRNWGYDVFDIWGQGTMVIVSS
1218	ABL-CD3-61A_scFv_VL-VH	QTVVTQEPSLTVSPGGTVTLTCASSTGAVTSGYYPNWFQQKPGQA PRALIYSTSNKHSWTPARFSGSLLGGKAALTLSGVQPEDEAEYYCL LYYGGAYVFGCGTKVTVLGGGGSGGGGSGGGGSGGGGSGGGGSEVQLV ESGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCLEWVSS ISRSGTYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYYC ARERWELLYFDYWGQGTLVTVSS
1219	ABL-CD3-62A_scFv_VL-VH	NFMLTQPHSVSESPGKTVAISCTRSSGSIASNYVQWYQQRPGSSPT AVIYEDNQRPSGVPDRFSGSIDSSSNSAFLTISGLKTEDEADYYCQS YDSSNRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSGGGGSEVQLVES GGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCLEWVSSIS RSSGYIFYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYYCV RERVGAGFDYWGQGTLVTVSS
1220	ABL-CD3-63A_scFv_VL-VH	NFMLTQPHSVSESPGKTVTISCTRTSGSIASNYVQWYQQRPGSSPTT VIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEAAYYCQSY DRSNRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSQVQLQESG PGLVKPSETLSLTCTVSGGSISSYYWSWIRQPAGKCLEWIGRIYTSG STKYNPSLKSRVTMSVDTSKNQFSLKLISVTAADTAVYFCARERIR DLYFDYWGQGTLVTVSS
1221	ABL-CD3-64A_scFv_VL-VH	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSPTT VIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYYCQSY DSSNRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQVAESG GGLVKPGGSLRLSCAASGFTFSRYSMNWVRQAPGKCLEWVSSISS SGSYTYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYYCVR ERGKGAGMDVWGQGTTVTVSS
1222	ABL-CD3-65A_scFv_VL-VH	QSVLTQPPSASGTPGQRVTISCSGSSSNIGSNYVYWYQQLPGTAPK LLIYSNNQRPSGVPDRFSGSKSGTSASLAISGLRSEDEADYYCAAW DDSLSGVVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSQVQLQQ WGAGLLKPSETLSLTCAVYGGSFSGYYWSWIRQPPGKCLEWIGEI QHSGSTNYNPSLKSRVTISVDTSKNQFSLKLSSVTAADTAVYYCAR EYYYYGMDVWGQGTTVTVSS
1223	ABL-CD3-66A_scFv_VL-VH	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSPTT VIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEGDYYCQSY DRSNRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSQVQLQESG PGLVKPSETLSLTCTVSGGSISSYYWSWIRQPAGKCLEWIGRIYASG STYYNPSLKSRVTMSVDTSKNQFSLKLSSVTAADTAVYYCAREKR SRLYFDYWGQGTLVTVSS

SEQ ID NO:	Name	Sequence
1224	ABL-CD3-68A_scFv_VL-VH	SYELTQPPSVSVSPGQTARITCSGDALPKQYAYWYQQKPGQAPVL VIYKDSERPSGIPERFSGSSSGTTVTLTISGVQAEDEADYYCQSADS SGTYVVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESG GGLVKPGGSLRLSCAASGFTFSSSIMNWVRQAPGKCLEWVSSISGS SSYIYYADSVKGRFTISRDNAKNSQYLQMKSLRAEDTAVYYCARE RWNLLYFDYWGQGTLVTVSS
1225	ABL-CD3-71A_scFv_VL-VH	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSPTT VIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYYCQSY DRSNRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSQVQLQESG PGLVKPSETLSLTCTVSGGSINSYYWSWIRQPAGKCLEWIGRIYTSG STNYNPSLKSRVTMSVDTSKKQFSLKLSSVTAADTAVYYCARERIS RLYFDYWGQGILVTVSS
1226	ABL-CD3-72A_scFv_VL-VH	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSPTT VIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYYCQSY DSSNRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESG GGLVKPGGSLRLSCAASGFTFSTYIMNWVRQAPGKCLEWVSSISSS RSYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYYCARE DRYRLFFDYWGQGTLVTVSS
1227	ABL-CD3-74A_scFv_VL-VH	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAPVL VIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYCYSTDS SGNHWVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESG GGLVKPGGSLRLSCAASGFTFSSYSMKWVRQAPGKCLEWVSSISSS SSYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYYCARD RGELTLWYWGQGTLVTVSS
1228	ABL-CD3-76A_scFv_VL-VH	SYELTQPPSVSVSPGQTARITCSGDALPKKYAYWYQQKSGQAPVL VIYEDSKRPSGIPERFSGSSSGTMATLTISGAQVEDEADYYCYSTDS SGNHWVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESG GGLVKPGGSLRLSCAASGFTFSNYYMNWVRQAPGKCLERVSSISS SSNYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYYCAR DRRELPLDYWGQGTVVTVSS
1229	ABL-CD3-77A_scFv_VL-VH	QSVLTQPPSVSGAPGQRVTISCTGSSSNIGAGYDVHWYQQLPGTAP KLLIYGNSNRPSGVPDRFSGSKSGTSASLAITGLQAEDEADYYCQS YDSSLSGSVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVE SGGGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCLEWVSSI SSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYYCA RDGELGIGTYFDYWGQGTLVTVSS
1230	ABL-CD3-79A_scFv_VL-VH	QTVVTQEPSFSVSPGGTVTLTCGLSSGSVSTSYYPSWYQQTPGQAP RTLIYSTNTRSSGVPDRFSGSILGNKAALTITGAQADDESDYYCVL YMGSGIWVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVE SGGGLVKPGGSLRLSCAASGFTVSNYSMNWVRQAPGKCLEWVSSI SRSSSYIYYADSVKGRFTISRDNAKNSLFLQMNSLRAEDTAVYYCA RERWELLYFDYWGQGTLVTVSS
1231	ABL-CD3-81A_scFv_VL-VH	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSPTT VIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEAYYYCQSF DSSNRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSQVQLQESG PGLVKPSQTLSLTCTVSGGSISSGGYYWSWIRQHPGKCLEWIGYIY YSGSTYYNPSLKSRVTISVDTSKDQFSLKLSSVTAADTAVYYCARE RKTSLPFDIWGQGTMVTVSS

SEQ ID NO:	Name	Sequence
1232	ABL-CD3-85A_scFv_VL-VH	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSPTT VIYEDNHRPSGVPDRFSGSIDSSSNSASLTIAGLKTEDEADYYCQSY DSSNVVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESG GGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCLEWVSSISR RSGYIYYADSVKGRFTLSRDNAKKSLYLQMNSLRAEDTAVYYCA RDLNWAFDYWGQGTLVTVSS
1233	ABL-CD3-85B_scFv_VL-VH	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSPTT VIYEDNHRPSGVPDRFSGSIDSSSNSASLTIAGLKTEDEADYYCQSS DSSNVVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESG GGLVKPGGSLRLSCAASGFTFSSYSMNWVRQAPGKCLEWVSSISR RSGYIYYADSVKGRFTLSRDNAKKSLYLQMNSLRAEDTAVYYCA RDLNWAFDYWGQGTLVTVSS
1234	ABL-CD3-87A_scFv_VL-VH	NFMLTQPHSVSESPGKTVTISCTRSSGSIASNYVQWYQQRPGSSPTT VIYEDNQRPSGVPDRFSGSIDSSSNSASLTISGLKTEDEADYYCQSY DSSNRVFGCGTKLTVLGGGGSGGGGSGGGGSGGGGSEVQLVESG GGLVKFGGSLRLSCAASGFTFSRYSMNWVRQAPGKCLEWVSSISS SSSYKYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYYCAR EGGNSHGMDVWGQGTTVTVSS
1235	ABL-CD3-88A_scFv_VL-VH	DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPNL LIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYNS YSWTFGCGTKVEIKGGGGSGGGGSGGGGSGGGGSEVQLVESGGG LVQPGGSLRLSCAASGFTFSRYWMSWVRQAPGKCLEWVANIKED GSEKYYVDSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYFCARE RRTGYFDYWGQGTLVTVSS
1236	ABL-CD3-89A_scFv_VL-VH	EIVLTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQAPR LLIYGASSRATGIPDRFSGSGSGTDFTLTISRLAPEDFAVYYCQQYG SSRWSFGCGTKVEIKGGGGSGGGGSGGGGSGGGGSEVQLVESGG GLVQPGGSLRLSCAASGFTFSSYWMSWVRQAPGKCLEWVSSISSR RGYKYHADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAVYYCAR VPYSGSYFDYWGQGTLVTVSS

DETAILED DESCRIPTION

[0032] The present disclosure relates to anti-CD3 antibodies. Applicants have used the proprietary AlivaMab® Mouse technology (*See* WO 2010/039900 and WO 2011/123708, incorporated by reference herein in their entirety) to generate panels of monoclonal antibodies (mAbs) that can target CD3 on T -cells. Mice were immunized with purified human CD3 epsilon/delta heterodimers and boosted with purified human CD3 epsilon/delta and cynomolgus CD3 epsilon/gamma heterodimers and human T cells. It is therefore possible that antibodies bind, CD3 epsilon alone (human and/or cynomolgus), CD3 delta alone (human and/or cynomolgus), CD3 gamma alone (human and/or cynomolgus), interfaces among these subunits, and conformation epitopes among these subunits only present in certain assemblies.

[0033] Embodiments of the disclosure pertain to the use of anti-CD3 antibodies, or antigen-binding fragments thereof, for the diagnosis, assessment and treatment of cancer and autoimmunity.

[0034] Portions of variable regions from the disclosed antibodies may include all or a combination of the complementarity determining regions (CDRs) of the VH and/or VL. The variable regions may be formatted with constant regions, either native or desirably modified for induction of either up-regulation or down-regulation of various effector functions, in a standard antibody structure (two heavy chains with two light chains). The variable regions may also be formatted as multi-specific antibodies, e.g., bispecific antibodies binding to two different epitopes on the CD3 protein or to two different antigens, one of which is CD3. In some embodiments, the antibody is a bispecific antibody. In some embodiments, the bispecific antibody comprises a tumor targeting arm. The variable regions may also be formatted as antibody fragments, e.g., single-domain antibodies comprising a single VH or VL, Fab, Fab'2, scFv, or chimeric antigen receptor (CAR). The antibodies may also be used as antibody-drug conjugates or carry other additions such as small molecule toxins or included as a part thereof, biologic toxins, radioisotopes, cytokines, oligopeptides, RNAs, or CAR-T cells to increase therapeutic modality and/or increase safety.

[0035] The practice of the present disclosure will employ, unless indicated specifically to the contrary, conventional methods of virology, immunology, microbiology, molecular biology and recombinant DNA techniques within the skill of the art, many of which are described below for the purpose of illustration. Such techniques are explained fully in the literature. See, e.g., Current Protocols in Molecular Biology or Current Protocols in Immunology, John Wiley & Sons, New York, N.Y.(2009); Ausubel et al., Short Protocols in Molecular Biology, 5th ed., Wiley & Sons, 2002; Sambrook and Russell, Molecular Cloning: A Laboratory Manual (4th Edition, 2012); and other like references.

[0036] This disclosure is not limited to particular compositions or biological systems, which can vary. It is also to be understood that the terminology used herein is for the purpose of describing particular illustrative embodiments only and is not intended to be limiting. The terms used in this specification generally have their ordinary meaning in the art, within the context of this disclosure and in the specific context where each term is used. Certain terms are discussed below or elsewhere in the specification, to provide additional guidance to the practitioner in describing the compositions and methods of the disclosure and how to make and use them. The scope and meaning of any use of a term will be apparent from the specific context in which the term is used. As such, the definitions set forth herein are intended to

provide illustrative guidance in ascertaining particular embodiments of the disclosure, without limitation to particular compositions or biological systems.

[0037] As used in the present disclosure and the appended claims, the singular forms "a," "an" and "the" include plural references unless the content clearly dictates otherwise.

[0038] Throughout the present disclosure and the appended claims, unless the context requires otherwise, the word "comprise", or variations such as "comprises" or "comprising," will be understood to imply the inclusion of a stated element or group of elements but not the exclusion of any other element or group of elements. "Comprising" may be synonymous with "including" or "containing."

[0039] It should be understood that wherever embodiments are described herein with the language "comprising," otherwise analogous embodiments described in terms of "consisting of" and/or "consisting essentially of" are also provided. As used herein, "consisting of" is a closed term that includes only the specific elements recited, and "consisting essentially of" includes the specific elements recited and may include additional unrecited, nonmaterial elements.

[0040] As used herein, the term "about" modifying the quantity of an ingredient, parameter, calculation, or measurement in the compositions of the disclosure or employed in the methods of the disclosure refers to variation in the numerical quantity that can occur, for example, through typical measuring and liquid handling procedures used for making isolated antibodies or pharmaceutical compositions in the real world; through inadvertent error in these procedures; through differences in the manufacture, source, or purity of the ingredients employed to make the compositions or carry out the methods; and the like without having a substantial effect on the chemical or physical attributes of the compositions or methods of the disclosure. Such variation can be within 10%, more typically still within 5%, of a given value or range. Whether or not modified by the term "about", the disclosure includes equivalents to the quantities. Reference to "about" a value or parameter herein includes (and describes) embodiments that are directed to that value or parameter per se. For example, description referring to "about X" includes description of "X." Numeric ranges are inclusive of the numbers defining the range. Moreover, all ranges disclosed herein are to be understood to encompass any and all subranges subsumed therein.

[0041] The terms "antibody" (Ab) and "immunoglobulin" (Ig) are used interchangeably herein and refer to a molecule (e.g., complete antibodies, antibody fragment or modified antibodies) capable of recognizing and binding to a specific target or antigen, such as a carbohydrate, polynucleotide, lipid, polypeptide, etc., through at least one antigen

recognition site, located in the variable region of the molecule. An antibody may be either membrane bound or secreted. As used herein, the term encompasses not only intact, or "whole", polyclonal or monoclonal antibodies, but also fragments thereof (such as single-variable domain (VH, VL or combination thereof) antibodies, Fab, Fab', F(ab')2, Fv, single chain (ScFv), synthetic variants thereof, naturally occurring variants, fusion proteins comprising an antibody portion with an antigen-binding fragment of the required specificity, humanized antibodies, chimeric antibodies, chimeric antigen receptors (CARs), and any other modified configuration of the immunoglobulin molecule that comprises an antigen-binding site or fragment (epitope recognition site) of the required specificity.

[0042] Antibody, or Ig, molecules typically comprise two identical heavy chains and two identical light chains linked together through disulfide bonds. Both heavy chains (IgH) and light chains (IgL) contain a variable (V) region or domain and a constant (C) region or domain. The portion of the IgH locus encoding the V region comprises multiple copies of variable (V), diversity (D), and joining (J) gene segments. The portion of the IgL loci encoding the V region comprises multiple copies of V and J gene segments. The V region encoding portion of the IgH and IgL loci undergo gene segment rearrangement, e.g., different combinations of a V, (D) and J gene segments arrange to form the IgH and IgL variable regions (VH and VL, respectively), to develop diverse antigen specificity in antibodies. Each variable region comprises three hypervariable complementarity-determining regions (CDRs) interspersed between the less variable framework regions (FRs). The heavy chain comprises HCDR1, HCDR2, and HCDR3. The light chain comprises LCDR1, LCDR2, and LCDR3. The secreted form of the IgH C region of most antibodies is made up of three C domains, CH1, CH2, CH3, and a hinge region, except for Cμ, which includes a CH4 regions and lacks a hinge region. The membrane-bound form of the IgH C region also has membrane and intra-cellular domains. The IgH constant region determines the isotype of the antibody, e.g. IgM, IgD, IgG1, IgG2, IgG3, IgG4, IgA and IgE. It will be appreciated that non-human mammals, such as an AlivaMab® Mouse, encoding multiple Ig isotypes will be able to undergo isotype class switching. There are two types of human IgL, Igκ and Igλ.

[0043] As used herein, the term "monoclonal antibody" or "mAb" refers to an antibody produced by an identical set of immune cells that is each a clone of a unique parent cell. Monoclonal antibodies are monospecific, have identical sequences, and bind to the same epitope in same way.

[0044] The term "antigen-binding fragment" as used herein refers to a polypeptide fragment that contains at least one CDR of an immunoglobulin heavy and/or light chain that binds to CD3. In this regard, an antigen-binding fragment of the antibodies may comprise 1, 2, 3, 4, 5, or all 6 CDRs of a VH and VL sequence set forth herein from anti-CD3 antibodies disclosed herein. In some embodiments, the antigen-binding fragment of the anti-CD3 antibodies comprise all 6 CDRs of a VH and VL sequence set forth herein from an anti-CD3 antibody disclosed herein. An antigen-binding fragment of the CD3-specific antibodies disclosed herein is capable of binding to the CD3 protein, preferably the receptor binding domain (RBD) of the CD3 protein.

[0045] In some embodiments, antibodies and antigen-binding fragments thereof disclosed herein include a heavy chain and a light chain CDR set, respectively interposed between a heavy chain and a light chain framework region (FR) set that provide conformational support to the CDRs and define the spatial relationship of the CDRs relative to each other. As used herein, the term "CDR set" refers to the three hypervariable regions of a heavy or light chain V region. Proceeding from the N terminus of a heavy or light chain, these regions are denoted as "CDR1," "CDR2," and "CDR3" respectively. An antigen-binding site, therefore, includes six CDRs, comprising the CDR set from each of a heavy and a light chain V region.

[0046] A "Fab" domain or fragment comprises the N-terminal portion of the IgH, which includes the V region and the CH1 domain of the IgH, and the entire IgL. A "$F(ab')_2$" domain comprises the Fab domain and a portion of the hinge region, wherein the 2 IgH are linked together via disulfide linkage in the middle hinge region. Both the Fab and $F(ab')_2$ are non-limiting examples of "antigen-binding fragments."

[0047] The C-terminal portion of the IgH, which is the crystallizable fragment of an antibody following papain digestion and comprises the CH2 and CH3 domains, is referred to as the "Fc" domain. The Fc domain is the portion of the Ig recognized by cell receptors, such as the FcR, and to which the complement-activating protein, C1q, binds. The lower hinge region, which is encoded in the 5' portion of the CH2 exon, provides flexibility within the antibody for binding to Fc receptors. Although the boundaries of the Fc domain may vary, the human IgG heavy chain Fc domain, as defined herein, comprises residue E216 to its carboxyl-terminus of the CH3 domain (or the CH4 domain for IgM and IgE antibodies), wherein the numbering is in the EU format as set forth in Edelman. The term "Fc domain" may refer to this sequence in isolation, or this sequence in the context of an antibody, antibody fragment, or Fc fusion protein. The amino acid sequence of a non-naturally occurring Fc domain (also referred to herein as a "variant Fc domain") may comprise one or more amino acid

modifications. Polymorphisms have been observed at a number of Fc domain positions, including but not limited to positions 270, 272, 312, 315, 356, and 358, according to EU numbering and, thus, slight differences between the presented sequence and sequences in the prior art may exist.

[0048] The term "EU format as set forth in Edelman" refers to the residue numbering of the human IgG1 EU antibody as described in Edelman GM *et al*., (1969) *Proc. Natl. Acad. USA*, 63, 78-85. The human IgG2 and human IgG4 residue numbering is also in the EU format (*See* Dillon TM, *et al*., *J Biol Chem*. Jun 6;283(23):16206-15 (2008); Aalberse RC *et al*., *Immunology* 105:9-19 (2002); and Scholthauer T *et al*., *Protein Engineering, Design and Selection*, 29(10): 457-466, (2016). The EU numbering of residues may be determined by aligning an antibody at regions of homology to the sequence of the antibody with a "standard" EU numbered sequence. Unless indicated to the contrary, all residue numbering of constant regions here will be according to EU numbering.

[0049] The term "Kabat numbering" refers to the residue numbering of the variable regions as described in Kabat *et al*, (1991) US Department of Health and Human Services, NIH publication n 91-3242. Variable region CDRs (CDR L1, CDR L2, CDR L3, CDR H1, CDR H2, CDR H3) are identified according to contact based on crystal structures as defined in Karpusas et al. Structure. Apr 4;9(4):321-9 (2001) and numbered in accordance with the Kabat numbering system. Unless indicated to the contrary, all residue numbering of variable regions will be according to Kabat.

[0050] An "Fv" fragment includes a non-covalent VH::VL heterodimer including an antigen-binding site. In certain embodiments, single chain Fv (scFv) antibodies are contemplated. A scFv is a covalently linked VH::VL heterodimer that is expressed from a gene fusion including VH- and VL-encoding genes linked by a peptide-encoding linker (*see, e.g.*, Huston et al. (1988) Proc. Nat. Acad. Sci. USA 85(16):5879-5883 and Byrd et al (1988) Science, 242:423-6, incorporated herein by reference). As used herein, the term "linker" refers to a polypeptide sequence that joins two or more antibody domains. Linkers' characteristics and their suitability for particular purposes are known in the art. See, *e.g.*, Chen *et al.* Adv Drug Deliv Rev. October 15; 65(10): 1357–1369 (2013) (disclosing various types of linkers, their properties, and associated linker designing tools and databases), which is incorporated herein by reference. Linkers may be flexible, rigid, or *in vivo* cleavable. Preferably, the linker is flexible. Flexible linkers typically comprise small non-polar (*e.g.* Gly) or polar (*e.g.*, Ser or Thr) amino acids. The most commonly used flexible linkers have sequences consisting

primarily of stretches of Gly and Ser residues ("GS" linker). Optionally, flexible linkers comprise repeats of 5 Gly and Ser residues.

[0051] Where bispecific antibodies are to be used, these may be conventional bispecific antibodies, which can be manufactured in a variety of ways (*see, e.g.,* Holliger, P. and Winter G. *Current Opinion Biotechnol.* 4, 446-449 (1993); Brinkmann U, Kontermann RE. *MAbs.* 9(2),182-212 (2017); Brinkmann U, Kontermann RE. *Science.* 372(6545), 916-917 (2021); Kontermann RE, Brinkmann U. Bispecific antibodies. *Drug Discov Today.* 20(7), 838-47 (2015); Spiess C, Zhai Q, Carter PJ. *Mol Immunol.* 67(2 Pt A), 95-106 (2015); Labrijn AF, Janmaat ML, Reichert JM, Parren PWHI. *Nat Rev Drug Discov.* 18(8), 585-608 (2019), incorporated herein by reference), *e.g.,* prepared chemically or from hybrid hybridomas, or may be any of the bispecific antibody fragments mentioned above.

[0052] As used herein, the term "chimeric antibody" refers to an antibody encoded by a polynucleotide sequence containing polynucleotide sequences from two or more species, *e.g.,* human and mouse. A chimeric antibody, as used herein, may also refer to an antibody that comprises regions from two or more different antibodies.

[0053] As used herein, the term "chimeric Ig chain" refers to an Ig heavy chain or an Ig light chain encoded by a polynucleotide sequence containing polynucleotide sequences from two or more species, e.g., human and mouse. For example, a chimeric Ig heavy chain may comprise a human VH domain, DH domain, JH domain, CH1 domain, and upper hinge region and mouse CH2 and CH3 domains. In some embodiments, the middle hinge region is mouse. In some embodiments, the middle hinge region is human. In some embodiments, the middle hinge region is chimeric.

[0054] As used herein, the term "human antibody" refers to an antibody having variable and constant regions derived from human germline immunoglobulin sequences. Human antibodies can include amino acid residues not encoded by human germline immunoglobulin sequences (*e.g.*, mutations introduced by random or site-specific mutagenesis *in vitro* or by somatic mutation *in vivo*). The term "human antibody," however, does not encompass antibodies in which the CDR sequences are derived from the germline of another mammalian species, such as a mouse, and have been grafted onto human framework sequences (i.e., humanized antibodies). The term encompasses antibodies with sequences derived from human genes, but which have been changed, *e.g.,* to decrease possible immunogenicity, increase affinity, decrease effector function eliminate cysteines that might cause undesirable folding, etc. The term also encompasses such antibodies comprising human amino acid sequences

produced recombinantly in non-human cells, which may impart a glycosylation pattern that is not typical of human cells.

[0055] As used herein, the term "isolated" antibody or antigen-binding fragment refers to an antibody or fragment that is at least partially free of the other biological molecules present in the cells used to produce it. The other biological molecules from which an isolated antibody or fragment is at least partially free include nucleic acid molecules, proteins, lipids, carbohydrates, cellular debris and culture medium. The term "isolated" antibody or fragment does not require, but does encompass, a complete absence of such other biological molecules. The term "isolated" antibody or fragment also does not refer to a complete absence of other molecules, such as water, buffers, salts or the components of pharmaceutical formulations. Thus, a molecule that is chemically synthesized or synthesized in a cell-free system will be "isolated" from its naturally associated components. A molecule may also be "isolated" using purification techniques well known in the art. Similarly, the term "isolated" polynucleotide or nucleic acid molecule, as used herein, refers to a polynucleotide of genomic, mRNA, cDNA, or synthetic origin or some combination thereof, which (1) is not associated with all or a portion of polynucleotide with which the "isolated nucleic acid" is associated with in nature, (2) is operably linked to a polynucleotide to which it is not linked in nature, or (3) does not occur in nature as part of a larger sequence. An isolated polynucleotide "comprising" a specific sequence may also include coding sequences for other proteins or immunoglobulin chains, expression regulatory sequences or vector sequences.

[0056] As used herein, the terms "polypeptide," "peptide" or "protein" are used interchangeably herein to describe a chain of amino acids that are linked together by chemical bonds. Non-limiting examples of a polypeptide or protein include an IgH, IgL, V domain, C domain, or an antibody.

[0057] As used herein, the term "amino acid modification" refers to at least one amino acid substitution, insertion, deletion or mutation in an amino acid sequence compared to a wild-type amino acid sequence. Such modifications are within the ordinary skill of an artisan. Some modifications, including amino acid deletions, substitutions and additions, of the Fc domain have been shown to alter the Fc domain's binding to its ligands and/or receptors resulting in a concomitant modification of effector function (see, *e.g.*, Shields *et al.*, J Biol Chem 276:6591-6604 (2001); Presta *et al.*, Biochem Soc Trans 30:487-490 (2002); Escobar-Cabrera E *et al.* Antibodies. 6: 7 (2017); Duncan AR *et al.* Nature. 1988; 332: 738–740 (1988); Duncan AR *et al.* Nature. 332: 563–564 (1988); Hezareh M *et al.* J Virol. 75: 12161–12168 (2001); Oganesyan V *et al. Acta Crystallogr D Biol Crystallogr*; 64: 700–704 (2008); Schlothauer T

et al. Protein Eng Des Sel. Oct; 29(10):457-466 (2016); Tao MH *et al. J. Immunol.* 143: 2595–2601 (1989); Von Kreudenstein TS *et al. MAbs.* 5(5):646–654 (2013); Wang X *et al. Protein Cell.* 9(1):63–73 (2018); U.S. Patent Publications 20040132101; 20070111260; 20110287032; 20180194860; U.S. Patent No. US 8409568; International Publication No. WO2017/177337, each incorporated by reference in its entirety). An amino acid deletion is indicated with a "Δ", and an insertion is indicated with a "In". For example, a deletion of the amino acid sequence from E216 to E222 is indicated as ΔE216-E222. An insertion of an arginine (R) between amino acid residues 234 and 235, *e.g.,* would be indicated as InR234/235.

[0058] A "conservative amino acid substitution" replaces an amino acid residue with a different amino acid residue having similar biochemical properties (*e.g.*, charge, hydrophobicity, or size). Generally, conservative amino acid substitutions do not substantially change the functional properties of a protein. When comparing proteins comprising conservative substitutions, the percent sequence similarity may be adjusted to account for the conservative nature of the substitution. Such adjustments are well-known in the art. *See, e.g.,* Pearson, *Methods Mol. Biol.* 243:307-31 (1994). Table 2, *infra*, provides some of the biochemical properties of the twenty naturally occurring amino acids. Table 3, *infra*, provides non-limiting examples of conservative amino acid substitutions for each of the naturally occurring amino acids.

Table 2.

Three Letter Code	Charge	Polarity
Ala	neutral	nonpolar
Arg	positive	polar
Asn	neutral	polar
Asp	negative	polar
Cys	neutral	polar
Gly	neutral	nonpolar
Gln	neutral	polar
Glu	negative	polar
His	positive	polar
Ile	neutral	nonpolar
Leu	neutral	nonpolar
Lys	positive	polar
Met	neutral	nonpolar
Phe	neutral	nonpolar
Pro	neutral	nonpolar
Ser	neutral	polar
Thr	neutral	polar
Trp	neutral	nonpolar
Tyr	neutral	polar

Table 3.

Original Residue	Conservative Substitutions	Exemplary Substitutions
Ala (A)	Val	Val; Leu; Ile
Arg (R)	Lys	Lys; Gln; Asn
Asn (N)	Gln	Gln; His; Asp, Lys; Arg
Asp (D)	Glu	Glu; Asn
Cys (C)	Ser	Ser; Ala
Gln (Q)	Asn	Asn; Glu
Glu (E)	Asp	Asp; Gln
Gly (G)	Ala	Ala
His (H)	Arg	Asn; Gln; Lys; Arg
Ile (I)	Leu	Leu; Val; Met; Ala; Phe; Norleucine
Leu (L)	Ile	Norleucine; Ile; Val; Met; Ala; Phe
Lys (K)	Arg	Arg; Gln; Asn
Met (M)	Leu	Leu; Phe; Ile
Phe (F)	Tyr	Leu; Val; Ile; Ala; Tyr
Pro (P)	Ala	Ala
Ser (S)	Thr	Thr
Thr (T)	Ser	Ser
Trp (W)	Tyr	Tyr; Phe
Tyr (Y)	Phe	Trp; Phe; Thr; Ser
Val (V)	Leu	Ile; Leu; Met; Phe; Ala; Norleucine

[0059] The term "percent sequence identity" in the context of polypeptide (or polynucleotide) sequences is defined as the percentage of amino acid (or nucleic acid) residues in a candidate sequence that are identical with the amino acids (or nucleic acid residues) in the reference polypeptide (or polynucleotide) sequence, after aligning the sequences and introducing gaps, if necessary, to achieve the maximum percent sequence identity, and not counting any conservative substitutions as different. Such conservative substitutions are considered (in addition to identical residues) in calculating the "percent sequence similarity" of two sequences. Residue positions that are not identical but are similar differ by conservative amino acid substitutions.

[0060] Sequence alignments (*e.g.* for determining percent amino acid sequence identity or sequence similarity, such as between a wild type protein and a mutein thereof) can be achieved in various ways that are within the skill in the art, for instance, using publicly available

sequence analysis computer software such as BLAST, BLAST-2, ALIGN, Megalign (DNASTAR), Gap, BESTFIT®, and other programs in programs in Wisconsin Package Version 10.0 or Genetics Computer Group (GCG), Madison, Wisconsin, software. The skilled artisan can determine appropriate parameters for aligning sequences, including any algorithms needed to achieve maximal alignment over the full length of the sequences being compared. Polypeptide sequences also can be compared using FASTA using default or recommended parameters. In the context of polypeptide sequences, FASTA takes the query amino acid sequence and searches a sequence database using local sequence alignment to identify similar sequences within the database (Pearson, *Methods Enzymol.* 183:63-98 (1990); Pearson, *Methods Mol. Biol.* 132:185-219 (2000); Pearson *Curr Protoc Bioinformatics*. Mar 24;53:3.9.1-25 (2016); each herein incorporated by reference). BLAST, especially blastp or tblastn, using default parameters may be used to compare a query sequence to a database containing sequences from different organisms. *See, e.g.*, Altschul *et al.*, *J. Mol. Biol.* 215:403-410 (1990); Altschul *et al.*, *Nucleic Acids Res.* 25:3389-402 (1997); Eser *et al.*, *PLoS One*. 22;9(12): e115445 (2014), each herein incorporated by reference.

[0061] Amino acids may be grouped based on their similar biochemical properties. Such groupings that may be used to define conservative substitutions include 1) amino acid residues with aliphatic side chains: glycine, alanine, valine, leucine, and isoleucine; 2) amino acid residues with aliphatic-hydroxyl side chains: serine and threonine; 3) amino acid residues with amide-containing side chains: asparagine and glutamine; 4) amino acid residues with aromatic side chains: phenylalanine, tyrosine, and tryptophan; 5) amino acid residues with basic side chains: lysine, arginine, and histidine; 6) amino acid residues with acidic side chains: aspartic acid and glutamic acid; and 7) amino acid residues with sulfur-containing side chains: cysteine and methionine. Non-limiting examples of preferred conservative amino acids substitution groups include: valine-leucine-isoleucine, phenylalanine-tyrosine, lysine-arginine, alanine-valine, glutamate-aspartate, and asparagine-glutamine.

[0062] As used herein, the term “effector function” refers to the responses of cells of the immune system that are triggered by the interaction of antibodies and antibody-antigen complexes. These effector functions usually involve one of three major mechanisms: antibody-dependent cell-mediated cytotoxicity (ADCC), complement-dependent cytotoxicity (CDC), and opsonization and phagocytosis. In ADCC, the Fc receptors on cytotoxic T cells, natural killer (NK) cells, or macrophages bind to the Fc domains of antibodies that are bound to a target cell, resulting in the secretion of substances, such as lytic enzymes, perforin, granzymes and tumor necrosis factor, that mediate the destruction of the target cell. In CDC,

cell death is induced via activation of the complement cascade. *See* Daeron, *Annu. Rev. Immunol.*, 15:203-234 (1997); Ward and Ghetie, *Therapeutic Immunol.*, 2:77-94 (1995); and Ravetch and Kinet, *Annu. Rev. Immunol.* 9:457-492 (1991)). In opsonization and phagocytosis, a pathogen-bound antibody's Fc domain binds to a Fc receptor on the surface of a phagocyte, inducing phagocytosis. Such effector functions generally require the Fc domain to be combined with a binding domain (*e.g.* an antibody variable domain) and can be assessed using standard assays that are known in the art (see, *e.g.*, WO 05/018572, WO 05/003175, and U.S. Pat. No. 6,242,195). The Fc domain of the antibody mediates immune effector mechanisms. IgG antibodies activate effector pathways of the immune system by binding to members of the family of cell surface Fcγ receptors and to Clq of the complement system. Ligation of effector proteins by clustered antibodies triggers a variety of responses, including release of inflammatory cytokines, regulation of antigen production, endocytosis, and cell killing. These responses can provoke unwanted side effects such as inflammation and thrombosis. Accordingly, the present disclosure further relates to anti-CD3 antibodies, with modified effector functions, including antibodies in which one or more effector functions is reduced or eliminated.

[0063] As used herein, the term "modified effector functions" refers to a Fc domain with one or more effector functions that differ from a wild-type immunoglobulin Fc domain. In some embodiments, one or more effector functions are reduced. Optionally, one or more effector functions are eliminated. The modified or reduced effector functions may be the result of lower binding affinity of the Fc domain of the antibodies disclosed herein to effector molecules (e.g., FcγRs and/or C1q). For example, the anti-CD3 antibodies disclosed herein may have reduced Fc receptor binding and complement activation compared with that of wild-type anti-CD3 antibodies. In some embodiments, a variant Fc domain has a reduced antibody dependent cell-mediated cytotoxicity (ADCC). Effector function of an anti-CD3 antibody may be determined using one of many known assays, including the CDC assay, the ADCC assay, and the phagocytosis assay (*see*, Xu-Rong Jiang *et al.*, *Nature Reviews Drug Discovery* 10: 101–111 (2011) and Liu *et al.*, *The Journal of Biological Chemistry* 292:1876-1883 (2017)). One or more of the antibody's effector functions may be reduced by at least 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, or 95% relative to the effector function of a wild-type antibody.

[0064] The strength, or affinity of immunological binding interactions can be expressed in terms of the dissociation constant (K_D) of the interaction, wherein a smaller K_D represents a greater affinity. Immunological binding properties of selected polypeptides can be quantified

using methods well known in the art. One such method entails measuring the rates of antigen-binding site/antigen complex formation and dissociation, wherein those rates depend on the concentrations of the complex partners, the affinity of the interaction, and on geometric parameters that equally influence the rate in both directions. Thus, both the "on rate constant" (k_{on}) and the "off rate constant" (k_{off}) can be determined by calculation of the concentrations and the actual rates of association and dissociation. The ratio of k_{off} /k_{on} enables cancellation of all parameters not related to affinity, and is thus equal to the dissociation constant, K_D. See, generally, Davies *et al.* (1990) *Annual Rev. Biochem.* 59:439-473. An antibody is considered to specifically bind an antigen when the K_D is $\leq$ 1 μM, preferably $\leq$ 100 nM. High affinity antibodies generally have a K_D in the low nanomolar (10^{-9}) range, and very high affinity antibodies generally have a K_D in picomolar (10^{-12}) range. A K_D binding affinity constant can be measured by surface plasmon resonance, *e.g.* using the BIACORE® system (Cytiva Life Sciences, Uppsala, Sweden and Piscataway, N.J.). *See* also, Jonsson *et al.*, *Ann. Biol. Clin.* 51:19-26 (1993); Jonsson *et al.*, *Biotechniques* 11:620-627 (1991); Jonsson *et al.*, *J. Mol. Recognit.* 8:125-131 (1995); Johnsson *et al.*, *Anal. Biochem.* 198:268-277 (1991); Hearty S *et al.*, *Methods Mol Biol.* 907:411-42 (2012), each incorporated herein by reference. The K_D may also be measured using a KINEXA® system (Sapidyne Instruments, Hanover, Germany and Boise, ID). The K_D may also be measured by biolayer interferometry (BLI) using an OCTET® system (Sartorius AG, Goettingen, Germany). An antibody, or antigen-binding fragment thereof, is said to "specifically bind," "immunologically bind," and/or is "immunologically reactive" to CD3 if it reacts at a detectable level (within, for example, an ELISA assay) with CD3, and does not react detectably with unrelated polypeptides under similar conditions. In some embodiments, the antibody, or antigen-binding fragment thereof, specifically binds CD3.

[0065] As used herein, the term "avidity" refers to the overall strength of an antibody-antigen complex. Avidity relates to three major parameters: the affinity of the antibody for the epitope; the valency of both the antibody and antigen; and the structural arrangement of the parts that interact. As used herein, "avidity" describes the increased affinity that occurs as result of multiple antigen binding sites on an immunoglobulin.

[0066] As used herein, the terms "polynucleotide" and "nucleic acid molecule" are used interchangeably and refer to a polymer of nucleic acids that are linked together by chemical bonds. Polynucleotides include, but are not limited to, DNA, cDNA, RNA, mRNA, and gene sequences and segments. Polynucleotides may be isolated from a living source such as a eukaryotic cell, prokaryotic cell or virus, or may be derived through in vitro manipulation by using standard techniques of molecular biology, or by DNA synthesis, or by a combination

of a number of techniques. Polynucleotides may comprise ribonucleotides, deoxynucleotides, modified forms of either type of nucleotide, or a combination thereof. A polynucleotide may be single-stranded or double-stranded. A reference herein to a nucleotide sequence encompasses its complement, unless otherwise specified. Thus, a reference to a polynucleotide having a particular sequence should be understood to encompass its complementary strand, with its complementary sequence.

[0067] As used herein, the term "highly stringent conditions" refers to hybridization to filter-bound DNA in 0.1x sodium chloride/sodium citrate (SSC) at 65 °C, followed by one or more washes in 0.1x SSC, 0.1% SDS at 50-65 °C. (Ausubel et al., eds., 1989, Current Protocols in Molecular Biology, Vol. I, Green Publishing Associates, Inc., and John Wiley & Sons, Inc., N.Y., at p. 2.10.3).

[0068] As used herein, the term "operably linked" refers to two structures that have been placed in a functional relationship with each other. In the context of an antibody, for example, a targeting structure may be operably linked to a structure that confers effector function. For example, the antigen-binding sequence of an antibody (*e.g.*, variable region or VH or VL domain) may be operatively linked to a Fc domain. In the context of a polynucleotide, a coding sequence may be operatively linked to a non-coding regulatory sequence, such as a promoter, an enhance, a signal sequence, a ribosome binding sequence, a splice acceptor sequence, a splice donor sequence, a termination sequence, etc. Two operably linked structures may be directly connected. Alternatively, two operably linked structures may be connected via one or more intermediary structures. For example, the antigen-binding portion of an antibody may be operably linked to the Fc domain via a CH1 domain, a hinge region and/or a linker sequence. Similarly, operably linked non-coding regulatory sequences include both sequences that act in *cis* and are contiguous with the coding sequence and sequences that act in *trans* or at a distance to control the coding sequence.

[0069] As used herein, the term "vector" refers to a polynucleotide molecule that can replicate in a cell into which another polynucleotide fragment can be integrated without loss of the vector's ability to replicate. Vectors may originate from a virus, a plasmid or the cell of a higher organism. Vectors are utilized to introduce foreign or recombinant DNA into a host cell, wherein the vector is replicated. Non-limiting examples of vectors include viral vectors, naked DNA or RNA expression vectors, bacterial vectors, mammalian vectors, plasmids, cosmids, phage vectors, DNA or RNA expression vectors associated with cationic condensing agents, DNA or RNA expression vectors encapsulated in liposomes, and certain eukaryotic cells, such as producer cells. In some embodiments, the vectors autonomously replicate in the host cell

into which they are introduced. Optionally, the vectors integrate into the host cell's genome and are replicated along with the host genome. Vectors may be capable of directing the expression of coding sequences contained within them. Such vectors are referred to herein as "recombinant expression vectors" or "expression vectors."

[0070] A polynucleotide can be contained in a vector, which can facilitate manipulation of the polynucleotide, including introduction of the polynucleotide into a target cell. The vector may be a cloning vector, which is useful for maintaining the polynucleotide. Where the polynucleotide encodes an RNA, for expressing the encoded RNA in a particular cell, either for subsequent translation of the RNA into a polypeptide or for subsequent trans regulatory activity by the RNA in the cell, the vector may be an expression vector, which contains, in addition to the polynucleotide, regulatory elements useful for expressing the polynucleotide. An expression vector may contain the expression elements necessary to achieve, for example, sustained transcription of the encoding polynucleotide, or the regulatory elements can be operatively linked to the polynucleotide prior to its being cloned into the vector.

[0071] An expression vector generally contains a promoter sequence, which can provide constitutive or, if desired, inducible, tissue-specific or developmental-stage-specific expression of the encoding polynucleotide; a poly-A sequence; and a ribosome recognition site or internal ribosome entry site, or other regulatory elements such as an enhancer, which can be tissue specific. The vector also can contain elements required for replication in a prokaryotic or eukaryotic host system or both, as desired. Such vectors, which include plasmid vectors and viral vectors such as bacteriophage, baculovirus, retrovirus, lentivirus, adenovirus, vaccinia virus, alpha virus and adeno-associated virus vectors, are well known and can be purchased from a commercial source (Promega, Madison Wis.; Agilent technologies, Santa Clara Cal.; Thermo Fisher Scientific, Waltham, MA.) or can be constructed by one skilled in the art (see, *e.g.*, Meth. Enzymol., Vol. 185, Goeddel, ed. (Academic Press, Inc., 1990); Jolly, *Canc. Gene Ther*. 1:51-64, 1994; Flotte, J. Bioenerg. Biomemb 25:37-42, 1993; Kirshenbaum *et al.*, *J. Clin. Invest*, 92:381-387, 1993; each of which is incorporated herein by reference).

[0072] The term "polynucleotide construct" as used herein refers to a sequence of DNA artificially constructed by genetic engineering, recombineering or synthesis. In some embodiments, the DNA constructs are linearized prior to recombination. In another embodiment, the DNA constructs are not linearized prior to recombination.

[0073] As used herein, the term "host cell" refers to a cell into which a polynucleotide or a vector has been introduced. It should be understood that a "host cell" includes not only the particular subject cell but also the progeny of such a cell. Because certain modifications

may occur in succeeding generations due to either mutation or environmental influences, such progeny may not, in fact, be identical to the parent cell, but are still included within the scope of the term "host cell" as used herein, provided they still contain the vector, polynucleotide, or a portion thereof, either maintained episomally or integrated into the host-cell genome.

[0074] The terms "patient," "subject," and "individual" are used interchangeably herein and refer to either a human or a non-human animal in need to treatment. These terms include mammals, such as humans, primates (*e.g.,* monkey), livestock such as cattle, sheep, pigs, horses and goats, and companion animals such as dogs and cats. Optionally, the subject is a human. In some embodiments, the subject is suffering from or at risk for cancer.

[0075] The terms "treating" and "treatment" with regard to a subject, refers to improving at least one symptom of the subject's disease or disorder. Treating includes curing, improving, or at least partially ameliorating the disease or disorder or any symptom of the disease or disorder. With regard to cancer, these terms refer to an increased life expectancy of an individual suffering from cancer or that one or more of the symptoms of the cancer will be reduced. The terms also encompass a decreased risk of malignancy in a subject suffering from cancer. With respect to the treatment of autoimmune disease, treatment may refer to dampening the body's immune responses and controlling the autoimmune reaction.

[0076] As used herein, the terms "prevent," "preventing," and "prevention" refer to the prevention or delay of the recurrence or onset of, or a reduction in one or more symptoms of a disease or a disorder in a subject as a result of the administration of an anti-CD3 antibody of the disclosure. For example, in the context of cancer, "prevent," "preventing," and "prevention" refer to the inhibition, reduction, delay in the development, the prevention or delay of the recurrence, onset, or development of one or more symptoms associated with cancer in a subject and the maintenance of remission in the subject. Also, in the context of an autoimmune disease, "prevent", "preventing" and "prevention" refer to the inhibition, reduction, or delay in the development or onset of an autoimmune response or the prevention or delay of the recurrence, onset, or development of one or more symptoms associated with an autoimmune response.

[0077] As used herein, the term "therapeutically effective amount" refers to that amount of the therapeutic agent being administered, as a single agent or in combination with one or more additional agents, which will relieve to some extent one or more of the symptoms of the condition being treated. With respect to the treatment of cancer, a therapeutically effective amount refers to that amount which has at least one of the following effects: palliate, ameliorate, stabilize, reverse, prevent, slow or delay the progression of (and/or symptoms

associated with) of cancer. The effective amounts that may be used in the present disclosure varies depending upon the manner of administration, the age, body weight, and general health of the subject. The appropriate amount and dosage regimen can be determined using routine skill in the art.

[0078] A "prophylactically effective amount" refers to an amount effective, at dosages and for periods of time necessary, to achieve the desired prophylactic result. Typically, since a prophylactic dose is used in subjects in remission, the prophylactically effective amount may be less than the therapeutically effective amount.

[0079] As used herein, the terms "pharmaceutically acceptable carrier" and "pharmaceutically acceptable excipient" are used interchangeably and refer to any and all solvents, dispersion media, coatings, antibacterial and antifungal agents, isotonic and absorption delaying agents, and the like that are physiologically compatible. Pharmaceutically acceptable carriers are well known in the art. See, *e.g.*, Remington's Pharmaceutical Sciences and U.S. Pharmacopeia: National Formulary, Mack Publishing Company, Easton, PA (1984), incorporated herein by reference. These carriers, without limitation, may be included in the FDA compendium of excipients that are generally regarded as safe (GRAS) (https://www.fda.gov/food/food-ingredients-packaging/generally-recognized-safe-gras). Some examples of pharmaceutically acceptable carriers are water, saline, phosphate buffered saline, dextrose, glycerol, ethanol and the like, as well as combinations thereof. In many cases, it will be preferable to include isotonic agents, for example, sugars, polyalcohols such as mannitol, sorbitol, or sodium chloride in the composition. Additional examples of pharmaceutically acceptable substances are wetting agents or minor amounts of auxiliary substances such as wetting or emulsifying agents, preservatives or buffers, which enhance the shelf life or effectiveness of the antibody. Pharmaceutical compositions may be prepared by mixing an antibody disclosed herein with acceptable carriers, excipients, or stabilizers in the form of, *e.g.*, lyophilized powders, slurries, aqueous solutions or suspensions (see, *e.g.*, Hardman, *et al.* (2001) Goodman and Gilman's The Pharmacological Basis of Therapeutics, McGraw-Hill, New York, NY; Gennaro (2000) Remington: The Science and Practice of Pharmacy, Lippincott, Williams, and Wilkins, New York, NY; Avis, *et al.* (eds.) (1993) Pharmaceutical Dosage Forms: Parenteral Medications, Marcel Dekker, NY; Lieberman, *et al.* (eds.) (1990) Pharmaceutical Dosage Forms: Tablets, Marcel Dekker, NY; Lieberman, *et al.* (eds.) (1990) Pharmaceutical Dosage Forms: Disperse Systems, Marcel Dekker, NY; Weiner and Kotkoskie (2000) Excipient Toxicity and Safety, Marcel Dekker, Inc., New York, NY; each incorporated herein by reference).

[0080] The term "administering," as used herein, refers to any mode of transferring, delivering, introducing, or transporting a pharmaceutical composition or other agent, such as an anti-CD3 antibody, to a subject. For cancer therapy, such administrations are typically parenteral, such as intravenous.

[0081] Each embodiment in this specification is to be applied *mutatis mutandis* to every other embodiment unless expressly stated otherwise.

[0082] Standard techniques may be used for recombinant DNA, oligonucleotide synthesis, and tissue culture and transformation (e.g., electroporation, lipofection). Enzymatic reactions and purification techniques may be performed according to manufacturer's specifications or as commonly accomplished in the art or as described herein. These and related techniques and procedures may be generally performed according to conventional methods well known in the art and as described in various general and more specific references that are cited and discussed throughout the present specification. Unless specific definitions are provided, the nomenclature utilized in connection with, and the laboratory procedures and techniques of, molecular biology, analytical chemistry, synthetic organic chemistry, and medicinal and pharmaceutical chemistry described herein are those well-known and commonly used in the art. Standard techniques may be used for recombinant technology, molecular biological, microbiological, chemical syntheses, chemical analyses, pharmaceutical preparation, formulation, and delivery, and treatment of patients.

Anti-CD3 Antibodies

[0083] AlivaMab® Mouse anti-CD3 antibodies were generated using both AlivaMab® XKL Mouse (a cross between AlivaMab® Kappa-Lambda mice and another genetic background) and AlivaMab® Mouse Lambda Only mice. Antibodies produced by the AlivaMab® XKL Mouse comprise a chimeric immunoglobulin heavy (IgH) chain and a human immunoglobulin kappa (Igκ) light chain or human immunoglobulin lambda (Igλ) light chain. Antibodies produced by AlivaMab® Lambda Only Mice comprise a chimeric IgH chain and a human immunoglobulin lambda (Igλ) light chain. The chimeric IgH chain of the AlivaMab® Mouse antibodies comprises a human variable region comprising a human variable heavy (VH) domain, a human diversity heavy (DH) domain, and a human joining heavy (JH) domain, a human constant heavy 1 (CH1) domain, a human upper hinge region (except for Cμ, which is naturally missing an upper hinge region), a mouse middle hinge region, a mouse CH2 domain, and a mouse CH3 domain. The human heavy chain variable region of any of the chimeric anti-CD3 antibodies may be readily appended to a fully human constant region, while maintaining

the antigen-binding characteristics of the parent chimeric antibody that were developed *in vivo* in the AlivaMab® Mouse. In some embodiments, the human heavy chain variable region, CH1 and, optionally, upper hinge region of the chimeric antibody are appended to human hinge, a human CH2 domain and a human CH3 domain in order to produce a fully human antibody.

[0084] A first aspect of the disclosure provides an anti-CD3 antibody or an antigen-binding fragment thereof. An anti-CD3 antibody, or an antigen-binding fragment thereof, may be human. In some embodiments, an anti-CD3 antibody, or an antigen-binding fragment thereof, of the disclosure is chimeric. In some embodiments, the chimeric anti-CD3 antibody, or an antigen-binding fragment thereof, comprises a chimeric IgH chain and a human Igκ chain. In some embodiments, the chimeric anti-CD3 antibody, or an antigen-binding fragment thereof, comprises a chimeric IgH chain and a human Igλ chain. In some embodiments, the chimeric anti-CD3 antibody comprises human and mouse sequences. In some embodiments, an anti-CD3 antibody, or an antigen-binding fragment thereof, of the disclosure is a bispecific antibody. In some embodiments, the bispecific antibody further comprises a tumor-targeting arm.

[0085] In some embodiments, the anti-CD3 antibody or the antigen-binding fragment thereof comprises one to six complementarity determining regions (CDRs) disclosed herein. The one to six CDRs may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 1-687.

[0086] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a heavy chain CDR3 (HCDR3) disclosed herein. The HCDR3 may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 574-687. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a light chain CDR3 (LCDR3) disclosed herein. The LCDR3 may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 227-344.

[0087] In some embodiments, the CDRs of an anti-CD3 antibody, or antigen-binding fragment thereof, may be mixed and matched between the CDRs of antibody clones disclosed herein. In some embodiments, an anti-CD3 antibody, or antigen-binding fragment thereof, comprises a HCDR1 comprising any HCDR1 sequence disclosed herein, a HCDR2 comprising any HCDR2 sequence disclosed herein, and a HCDR3 comprising any HCDR3 sequence disclosed herein. In some embodiments, the HCDR1, HCDR2 and HCDR3 are selected from three different anti-CD3 clones disclosed herein. In some embodiments, the HCDR1, HCDR2 and HCDR3 are selected from two different anti-CD3 clones disclosed herein. In some

embodiments, the HCDR1, HCDR2, and HCDR3 are from a single anti-CD3 clone disclosed herein.

[0088] In some embodiments, an anti-CD3 antibody, or an antigen-binding fragment thereof, comprises a LCDR1 comprising any LCDR1 sequence disclosed herein, a LCDR2 comprising any LCDR2 sequence disclosed herein, and a LCDR3 comprising any LCDR3 sequence disclosed herein. In some embodiments, the LCDR1, LCDR2 and LCDR3 are selected from three different anti-CD3 clones disclosed herein. In some embodiments, the LCDR1, LCDR2 and LCDR3 are selected from two different anti-CD3 clones disclosed herein. In some embodiments, the LCDR1, LCDR2, and LCDR3 are from a single anti-CD3 clone disclosed herein. The single anti-CD3 clone may be the same anti-CD3 clone from which the HCDR1, HCDR2, and HCDR3 were selected.

[0089] In some embodiments, the six CDRs of an anti-CD3 antibody, or antigen-binding fragment thereof, are from the same anti-CD3 antibody clone disclosed herein. In some embodiments, the six CDRs of an anti-CD3 antibody, or antigen-binding fragment thereof, are selected from the corresponding VH and VL of a single clone disclosed herein. In some embodiments, an anti-CD3 antibody, or an antigen-binding fragment thereof, comprises 1) a HCDR1, a HCDR2, and a HCDR3 selected from the HCDR1, HCDR2 and HCDR3 of one VH selected from any one of the VH regions disclosed herein and 2) a LCDR1, a LCDR2, and a LCDR3 selected from the LCDR1, LCDR2 and LCDR3 of one VL selected from any one of the VL regions disclosed herein. In some embodiments, an anti-CD3 antibody, or antigen-binding fragment thereof, comprises a HCDR1, a HCDR2, a HCDR3, a LCDR1, a LCDR2, and a LCDR3 within the corresponding VH and VL amino acid sequences of a single clone as disclosed herein.

[0090] In some embodiments, an anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VH comprising any one of the VH regions disclosed herein. In some embodiments, an anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising any one of the VL regions disclosed herein. In some embodiments, an anti-CD3 antibody, or an antigen-binding fragment thereof, comprises a corresponding VH and VL of a single clone.

[0091] The CDRs, VH and/or VL may be selected from any one of the clones from the group consisting of ABL-CD3-1 to ABL-CD3-113, ABL-CD3-1A to ABL-CD3-113A, and ABL-CD3-85B. In some embodiments, the CDRs, VH, and/or VL may be from an antibody selected from the group consisting of ABL-CD3-18, ABL-CD3-20, ABL-CD3-21, ABL-CD3-22, ABL-CD3-27, ABL-CD3-29, ABL-CD3-31, ABL-CD3-34, ABL-CD3-36, ABL-CD3-37,

ABL-CD3-39, ABL-CD3-40, ABL-CD3-41, ABL-CD3-43, ABL-CD3-44, ABL-CD3-45, ABL-CD3-47, ABL-CD3-49, ABL-CD3-52, ABL-CD3-53, ABL-CD3-56, ABL-CD3-57, ABL-CD3-61, ABL-CD3-62, ABL-CD3-63, ABL-CD3-64, ABL-CD3-65, ABL-CD3-66, ABL-CD3-68, ABL-CD3-71, ABL-CD3-72, ABL-CD3-74, ABL-CD3-76, ABL-CD3-77, ABL-CD3-79, ABL-CD3-81, ABL-CD3-85, ABL-CD3-87, ABL-CD3-88, ABL-CD3-89, ABL-CD3-18A, ABL-CD3-20A, ABL-CD3-21A, ABL-CD3-22A, ABL-CD3-27A, ABL-CD3-29A, ABL-CD3-31A, ABL-CD3-34A, ABL-CD3-36A, ABL-CD3-37A, ABL-CD3-39A, ABL-CD3-40A, ABL-CD3-41A, ABL-CD3-43A, ABL-CD3-44A, ABL-CD3-45A, ABL-CD3-47A, ABL-CD3-49A, ABL-CD3-52A, ABL-CD3-53A, ABL-CD3-56A, ABL-CD3-57A, ABL-CD3-61A, ABL-CD3-62A, ABL-CD3-63A, ABL-CD3-64A, ABL-CD3-65A, ABL-CD3-66A, ABL-CD3-68A, ABL-CD3-71A, ABL-CD3-72A, ABL-CD3-74A, ABL-CD3-76A, ABL-CD3-77A, ABL-CD3-79A, ABL-CD3-81A, ABL-CD3-85A, ABL-CD3-85B, ABL-CD3-87A, ABL-CD3-88A, and ABL-CD3-89A.

[0092] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises i) a heavy chain variable region comprising a HCDR1 disclosed herein, a HCDR2 disclosed herein, and a HCDR3 disclosed herein and ii) a light chain variable region comprising a LCDR1 disclosed herein, a LCDR2 disclosed herein, and a LCDR3 disclosed herein. The HCDR1 may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 345-457. In some embodiments, the HCDR2 comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 458-573. The HCDR3 may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 574-687. In some embodiments the LCDR1 comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 1-113. The LCDR2 may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 114-226. In some embodiments, the LCDR3 comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 227-344. In some embodiments, the VL region comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 688-914. The VH region may comprise an amino acid sequence selected from the group consisting of SEQ ID NOs: 915-1141.

[0093] It is known in the art that during the processing and expression of Fc-containing proteins (*e.g.* antibody heavy chains) that the C-terminal lysine may be cleaved (also known in the art as C-terminal lysine clipping). Accordingly, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the C-terminal lysine (i.e., the C-terminal lysine cleavage product) is also contemplated. In some embodiments, the first monomer comprises a C-terminal lysine. In some embodiments, the first monomer lacks a C-

terminal lysine. In some embodiments, the second monomer comprises a C-terminal lysine. In some embodiments, the second monomer lacks a C-terminal lysine.

[0094] It is also known in the art that the C-terminal cleavage process is imprecise and that additional C-terminal residues are cleaved. Accordingly, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the two C-terminal residues is also contemplated. In some embodiments, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the three C-terminal residues is also contemplated. In some embodiments, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the four C-terminal residues is also contemplated. In some embodiments, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the five C-terminal residues is also contemplated. In some embodiments, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the six C-terminal residues is also contemplated. In some embodiments, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the seven C-terminal residues is also contemplated. In some embodiments, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the eight C-terminal residues is also contemplated. In some embodiments, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the nine C-terminal residues is also contemplated. In some embodiments, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the ten C-terminal residues is also contemplated. In some embodiments, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the eleven C-terminal residues is also contemplated. In some embodiments, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the twelve C-terminal residues is also contemplated. In some embodiments, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the thirteen C-terminal residues is also contemplated. In some embodiments, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the fourteen C-terminal residues is also contemplated. In some embodiments, for each sequence disclosed herein that contains a C-terminal lysine, the corresponding sequence without the fifteen C-terminal residues is also contemplated.

[0095] In some embodiments, an anti-CD3 antibody is a whole antibody. In some embodiments, an anti-CD3 antibody is a single chain antibody. In some embodiments, an anti-

CD3 antibody is a scFv. In some embodiments, an anti-CD3 antibody is a Fab. In some embodiments, an anti-CD3 antibody is a Fab'. In some embodiments, an anti-CD3 antibody is a $F(ab')_2$. In some embodiments, an anti-CD3 antibody is a Fv. In some embodiments, the anti-CD3 antibody is a scFv comprising an amino acid sequence selected from the group consisting of SEQ ID NOs.: 1155-1236. The skilled artisan would recognize that an scFv fragment can be arranged, from N-terminus to C-terminus, in a VH to VL orientation or in a VL to VH orientation. As used herein, the term "scFv_VH-VL" refers to an scFv fragment which is arranged, from N-terminus to C-terminus, in a VH to VL orientation. Similarly, the term "scFv_VL-VH" refers to an scFv fragment which is arranged, from N-terminus to C-terminus, in a VL to VH orientation.

[0096] In some embodiments, the VH comprises a G44C substitution, according to Kabat numbering. In some embodiments, the VL comprises a G100C substitution, according to Kabat numbering. In some embodiments, the VH comprises a G44C substitution and the VL comprises a G100C substitution, according to Kabat numbering. In rare cases, the parental sequence at VH44 may be a different amino acid residue than G. In such instances, the VH44 residue (according to Kabat) is still mutated to cysteine. In more common, but still relatively rare cases, the parental sequence at VL position 100 may be an amino acid other than G. In such instances, the VL100 residue (according to Kabat) is still mutated to cysteine. Without being bound by theory, the introduction of such complementary cysteine residues can result in a disulfide bond, which can stabilize antibody fragments (*e.g.,* scFv). While non-exhaustive, other Cys substitutions are known and may be employed (see Weatherill et al, PEDS (2012) 25:321-9) including VL position 99, 100a, and 101. In some embodiments, free cysteine residues in the VH and/or VL may be substituted to a non-cysteine residue.

[0097] In some embodiments, an anti-CD3 antibody is a bispecific antibody. In some embodiments, the anti-CD3 bispecific antibody further comprises a targeting antibody, or an antigen-binding fragment thereof. In some embodiments, the targeting antibody binds to a specific tissue. It is within the skill in the art to select an appropriate targeting antibody based on the tissue to be targeted. In some embodiments, the targeting antibody is an anti-tumor antibody, or an antigen-binding fragment thereof. In some embodiments, the targeting antibody binds to a specific tissue. It is within the skill in the art to select an appropriate targeting antibody based on the tumor to be targeted.

[0098] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-1 and ABL-CD3-1A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an

LCDR3 comprising the amino acid sequences of SEQ ID NOs: 1, 114, and 227, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 345, 458, and 574, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-1. The VL may comprise the amino acid sequence of SEQ ID NO: 688. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-1. The VH may comprise the amino acid sequence of SEQ ID NO: 915. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-1. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 688 and a VH comprising the amino acid sequence of SEQ ID NO: 915. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-1A. The VL may comprise the amino acid sequence of SEQ ID NO: 801. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-1A. The VH may comprise the amino acid sequence of SEQ ID NO: 1028. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-1A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 801 and a VH comprising the amino acid sequence of SEQ ID NO: 1028. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-1_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 915; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 688. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-1_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 688; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 915. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-1A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1028; a linker comprising the amino acid sequence of (Gly-Gly-Gly-

Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 801. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-1A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 801; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1028.

[0099] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-2 and ABL-CD3-2A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 2, 115, and 228, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 346, 459, and 575, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-2. The VL may comprise the amino acid sequence of SEQ ID NO: 689. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-2. The VH may comprise the amino acid sequence of SEQ ID NO: 916. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-2. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 689 and a VH comprising the amino acid sequence of SEQ ID NO: 916. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-2A. The VL may comprise the amino acid sequence of SEQ ID NO: 802. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-2A. The VH may comprise the amino acid sequence of SEQ ID NO: 1029. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-2A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 802 and a VH comprising the amino acid sequence of SEQ ID NO: 1029. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-2_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 916; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising

the amino acid sequence of SEQ ID NO: 689. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-2_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 689; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 916. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-2A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1029; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 802. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-2A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 802; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1029.

[00100] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-3 and ABL-CD3-3A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 3, 116, and 229, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 347, 460, and 576, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-3. The VL may comprise the amino acid sequence of SEQ ID NO: 690. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-3. The VH may comprise the amino acid sequence of SEQ ID NO:917. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-3. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 690 and a VH comprising the amino acid sequence of SEQ ID NO: 917. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-3A. The VL may comprise the amino acid sequence of SEQ ID NO: 803. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH

of antibody ABL-CD3-3A. The VH may comprise the amino acid sequence of SEQ ID NO: 1030. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-3A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 803 and a VH comprising the amino acid sequence of SEQ ID NO: 1030. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-3_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 917; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 690. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-3_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 690; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 917. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-3A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1030; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 803. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-3A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 803; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1030.

[00101] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-4 and ABL-CD3-4A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 4, 117, and 230, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 348, 461, and 577, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-4. The VL may

comprise the amino acid sequence of SEQ ID NO: 691. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-4. The VH may comprise the amino acid sequence of SEQ ID NO: 918. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-4. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 691 and a VH comprising the amino acid sequence of SEQ ID NO: 918. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-4A. The VL may comprise the amino acid sequence of SEQ ID NO: 804. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-4A. The VH may comprise the amino acid sequence of SEQ ID NO: 1031. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-4A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 804 and a VH comprising the amino acid sequence of SEQ ID NO: 1031. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-4_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 918; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 691. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-4_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 691; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 918. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-4A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1031; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 804. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-4A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-

terminus, a VL comprising the amino acid sequence of SEQ ID NO: 804; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1031.

[00102] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-5 and ABL-CD3-5A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 5, 118, and 231, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 349, 462, and 578, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-5. The VL may comprise the amino acid sequence of SEQ ID NO: 692. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-5. The VH may comprise the amino acid sequence of SEQ ID NO: 919. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-5. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 692 and a VH comprising the amino acid sequence of SEQ ID NO: 919. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-5A. The VL may comprise the amino acid sequence of SEQ ID NO: 805. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-5A. The VH may comprise the amino acid sequence of SEQ ID NO: 1032. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-5A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 805 and a VH comprising the amino acid sequence of SEQ ID NO: 1032. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-5_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 919; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 692. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-5_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 692; a linker

comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 919. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-5A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1032; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 805. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-5A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 805; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1032.

[00103] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-6 and ABL-CD3-6A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 6, 119, and 232, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 350, 463, and 579, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-6. The VL may comprise the amino acid sequence of SEQ ID NO: 693. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-6. The VH may comprise the amino acid sequence of SEQ ID NO: 920. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-6. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 693 and a VH comprising the amino acid sequence of SEQ ID NO: 920. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-6A. The VL may comprise the amino acid sequence of SEQ ID NO: 806. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-6A. The VH may comprise the amino acid sequence of SEQ ID NO: 1033. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-6A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid

sequence of SEQ ID NO: 806 and a VH comprising the amino acid sequence of SEQ ID NO: 1033. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-6_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 920; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 693. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-6_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 693; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 920. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-6A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1033; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 806. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-6A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 806; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1033.

[00104] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-7 and ABL-CD3-7A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 7, 120, and 233, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 351, 464, and 580, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-7. The VL may comprise the amino acid sequence of SEQ ID NO: 694. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-7. The VH may comprise the amino acid sequence of SEQ ID NO: 921. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of

antibody ABL-CD3-7. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 694 and a VH comprising the amino acid sequence of SEQ ID NO: 921. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-7A. The VL may comprise the amino acid sequence of SEQ ID NO: 807. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-7A. The VH may comprise the amino acid sequence of SEQ ID NO: 1034. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-7A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 807 and a VH comprising the amino acid sequence of SEQ ID NO: 1034. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-7_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 921; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 694. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-7_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 694; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 921. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-7A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1034; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 807. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-7A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 807; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1034. .

[00105] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-8 and ABL-CD3-8A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 8, 121, and 234, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 352, 465, and 581, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-8. The VL may comprise the amino acid sequence of SEQ ID NO: 695. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-8. The VH may comprise the amino acid sequence of SEQ ID NO: 922. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-8. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 695 and a VH comprising the amino acid sequence of SEQ ID NO: 922. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-8A. The VL may comprise the amino acid sequence of SEQ ID NO: 808. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-8A. The VH may comprise the amino acid sequence of SEQ ID NO: 1035. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-8A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 808 and a VH comprising the amino acid sequence of SEQ ID NO: 1035. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-8_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 922; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 695. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-8_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 695; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 922. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-

CD3-8A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1035; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 808. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-8A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 808; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1035.

[00106] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-9 and ABL-CD3-9A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 9, 122, and 235, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 353, 466, and 582, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-9. The VL may comprise the amino acid sequence of SEQ ID NO: 696. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-9. The VH may comprise the amino acid sequence of SEQ ID NO: 923. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-9. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 696 and a VH comprising the amino acid sequence of SEQ ID NO: 923. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-9A. The VL may comprise the amino acid sequence of SEQ ID NO: 809. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-9A. The VH may comprise the amino acid sequence of SEQ ID NO: 1036. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-9A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 809 and a VH comprising the amino acid sequence of SEQ ID NO: 1036. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-9_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or

antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 923; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 696. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-9_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 696; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 923. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-9A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1036; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 809. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-9A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 809; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1036.

[00107] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-10 and ABL-CD3-10A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 10, 123, and 236, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 354, 467, and 583, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-10. The VL may comprise the amino acid sequence of SEQ ID NO: 697. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-10. The VH may comprise the amino acid sequence of SEQ ID NO: 924. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-10. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 697 and a VH comprising the amino acid sequence of SEQ ID NO: 924. In some embodiments,

the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-10A. The VL may comprise the amino acid sequence of SEQ ID NO: 810. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-10A. The VH may comprise the amino acid sequence of SEQ ID NO: 1037. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-10A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 810 and a VH comprising the amino acid sequence of SEQ ID NO: 1037. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-10_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 924; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 697. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-10_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 697; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 924. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-10A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1037; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 810. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-10A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 810; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1037.

[00108] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-11 and ABL-CD3-11A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 11, 124, and 237, respectively;

and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 355, 468, and 584, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-11. The VL may comprise the amino acid sequence of SEQ ID NO: 698. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-11. The VH may comprise the amino acid sequence of SEQ ID NO: 925. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-11. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 698 and a VH comprising the amino acid sequence of SEQ ID NO: 925. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-11A. The VL may comprise the amino acid sequence of SEQ ID NO: 811. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-11A. The VH may comprise the amino acid sequence of SEQ ID NO: 1038. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-11A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 811 and a VH comprising the amino acid sequence of SEQ ID NO: 1038. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-11_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 925; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 698. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-11_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 698; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 925. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-11A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1038; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence

of SEQ ID NO: 811. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-11A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 811; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1038.

[00109] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-12 and ABL-CD3-12A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 12, 125, and 238, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 356, 469, and 585, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-12. The VL may comprise the amino acid sequence of SEQ ID NO: 699. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-12. The VH may comprise the amino acid sequence of SEQ ID NO: 926. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-12. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 699 and a VH comprising the amino acid sequence of SEQ ID NO: 926. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-12A. The VL may comprise the amino acid sequence of SEQ ID NO: 812. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-12A. The VH may comprise the amino acid sequence of SEQ ID NO: 1039. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-12A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 812 and a VH comprising the amino acid sequence of SEQ ID NO: 1039. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-12_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 926; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 699. In some embodiments, the anti-CD3 antibody,

or antigen-binding fragment thereof, comprises ABL-CD3-12_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 699; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 926. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-12A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1039; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 812. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-12A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 812; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1039.

[00110] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-13 and ABL-CD3-13A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 13, 126, and 239, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 357, 470, and 586, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-13. The VL may comprise the amino acid sequence of SEQ ID NO: 700. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-13. The VH may comprise the amino acid sequence of SEQ ID NO: 927. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-13. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 700 and a VH comprising the amino acid sequence of SEQ ID NO: 927. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-13A. The VL may comprise the amino acid sequence of SEQ ID NO: 813. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-13A. The VH may comprise the amino acid sequence of SEQ ID NO:

1040. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-13A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 813 and a VH comprising the amino acid sequence of SEQ ID NO: 1040. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-13_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 927; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 700. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-13_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 700; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 927. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-13A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1040; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 813. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-13A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 813; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1040.

[00111] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-14 and ABL-CD3-14A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 14, 127, and 240, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 358, 471, and 587, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-14. The VL may comprise the amino acid sequence of SEQ ID NO: 701. In some embodiments, the anti-CD3

antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-14. The VH may comprise the amino acid sequence of SEQ ID NO: 928. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-14. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 701 and a VH comprising the amino acid sequence of SEQ ID NO: 928. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-14A. The VL may comprise the amino acid sequence of SEQ ID NO: 814. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-14A. The VH may comprise the amino acid sequence of SEQ ID NO: 1041. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-14A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 814 and a VH comprising the amino acid sequence of SEQ ID NO: 1041. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-14_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 928; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 701. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-14_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 701; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 928. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-14A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1041; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 814. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-14A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 814; a linker comprising

the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1041.

[00112] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-15 and ABL-CD3-15A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 15, 128, and 241, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 359, 472, and 588, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-15. The VL may comprise the amino acid sequence of SEQ ID NO: 702. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-15. The VH may comprise the amino acid sequence of SEQ ID NO: 929. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-15. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 702 and a VH comprising the amino acid sequence of SEQ ID NO: 929. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-15A. The VL may comprise the amino acid sequence of SEQ ID NO: 815. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-15A. The VH may comprise the amino acid sequence of SEQ ID NO: 1042. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-15A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 815 and a VH comprising the amino acid sequence of SEQ ID NO: 1042. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-15_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 929; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 702. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-15_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 702; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein

n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 929. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-15A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1042; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 815. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-15A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 815; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1042.

[00113] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-16 and ABL-CD3-16A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 16, 129, and 242, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 360, 473, and 589, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-16. The VL may comprise the amino acid sequence of SEQ ID NO: 703. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-16. The VH may comprise the amino acid sequence of SEQ ID NO: 930. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-16. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 703 and a VH comprising the amino acid sequence of SEQ ID NO: 930. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-16A. The VL may comprise the amino acid sequence of SEQ ID NO: 816. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-16A. The VH may comprise the amino acid sequence of SEQ ID NO: 1043. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-16A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 816 and a VH comprising the amino acid sequence of SEQ ID NO:

1043. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-16_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 930; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 703. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-16_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 703; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 930. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-16A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1043; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 816. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-16A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 816; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1043.

[00114] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-17 and ABL-CD3-17A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 17, 130, and 243, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 361, 474, and 590, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-17. The VL may comprise the amino acid sequence of SEQ ID NO: 704. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-17. The VH may comprise the amino acid sequence of SEQ ID NO: 931. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-17. In some embodiments, the anti-CD3 antibody, or antigen-binding

fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 704 and a VH comprising the amino acid sequence of SEQ ID NO: 931. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-17A. The VL may comprise the amino acid sequence of SEQ ID NO: 817. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-17A. The VH may comprise the amino acid sequence of SEQ ID NO: 1044. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-17A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 817 and a VH comprising the amino acid sequence of SEQ ID NO: 1044. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-17_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 931; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 704. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-17_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 704; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 931. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-17A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1044; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 817. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-17A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 817; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1044.

[00115] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-18 and ABL-CD3-18A. The anti-CD3

antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 18, 131, and 244, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 362, 475, and 591, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-18. The VL may comprise the amino acid sequence of SEQ ID NO: 705. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-18. The VH may comprise the amino acid sequence of SEQ ID NO: 932. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-18. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 705 and a VH comprising the amino acid sequence of SEQ ID NO: 932. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-18A. The VL may comprise the amino acid sequence of SEQ ID NO: 818. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-18A. The VH may comprise the amino acid sequence of SEQ ID NO: 1045. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-18A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 818 and a VH comprising the amino acid sequence of SEQ ID NO: 1045. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-18_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 932; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 705. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-18_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 705; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 932. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-18A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1155. In some

embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-18A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1196.

[00116] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-19 and ABL-CD3-19A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 19, 132, and 245, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 363, 476, and 592, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-19. The VL may comprise the amino acid sequence of SEQ ID NO: 706. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-19. The VH may comprise the amino acid sequence of SEQ ID NO: 933. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-19. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 706 and a VH comprising the amino acid sequence of SEQ ID NO: 933. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-19A. The VL may comprise the amino acid sequence of SEQ ID NO: 819. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-19A. The VH may comprise the amino acid sequence of SEQ ID NO: 1046. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-19A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 819 and a VH comprising the amino acid sequence of SEQ ID NO: 1046. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-19_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 933; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 706. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-19_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 706; a linker

comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 933. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-19A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1046; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 819. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-19A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 819; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1046.

[00117] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-20 and ABL-CD3-20A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 20, 133, and 246, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 364, 477, and 593, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-20. The VL may comprise the amino acid sequence of SEQ ID NO: 707. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-20. The VH may comprise the amino acid sequence of SEQ ID NO: 934. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-20. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 707 and a VH comprising the amino acid sequence of SEQ ID NO: 934. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-20A. The VL may comprise the amino acid sequence of SEQ ID NO: 820. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-20A. The VH may comprise the amino acid sequence of SEQ ID NO: 1047. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-20A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid

sequence of SEQ ID NO: 820 and a VH comprising the amino acid sequence of SEQ ID NO: 1047. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-20_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 934; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 707. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-20_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 707; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 934. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-20A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1156. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-20A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1197.

[00118] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-21 and ABL-CD3-21A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 21, 134, and 247, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 365, 478, and 594, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-21. The VL may comprise the amino acid sequence of SEQ ID NO: 708. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-21. The VH may comprise the amino acid sequence of SEQ ID NO: 935. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-21. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 708 and a VH comprising the amino acid sequence of SEQ ID NO: 935. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-21A. The VL may comprise the amino acid sequence of SEQ ID NO: 821. In some

embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-21A. The VH may comprise the amino acid sequence of SEQ ID NO: 1048. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-21A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 821 and a VH comprising the amino acid sequence of SEQ ID NO: 1048. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-21_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 935; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 708. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-21_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 708; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 935. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-21A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1157. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-21A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1198.

[00119] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-22 and ABL-CD3-22A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 22, 135, and 248, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 366, 479, and 595, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-22. The VL may comprise the amino acid sequence of SEQ ID NO: 709. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-22. The VH may comprise the amino acid sequence of SEQ ID NO: 936. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of

antibody ABL-CD3-22. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 709 and a VH comprising the amino acid sequence of SEQ ID NO: 936. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-22A. The VL may comprise the amino acid sequence of SEQ ID NO: 822. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-22A. The VH may comprise the amino acid sequence of SEQ ID NO: 1049. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-22A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 822 and a VH comprising the amino acid sequence of SEQ ID NO: 1049. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-22_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 936; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 709. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-22_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 709; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 936. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-22A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1158. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-22A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1199.

[00120] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-23 and ABL-CD3-23A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 23, 136, and 249, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 367, 480, and 596, respectively. In some embodiments, the anti-CD3 antibody, or

antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-23. The VL may comprise the amino acid sequence of SEQ ID NO: 710. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-23. The VH may comprise the amino acid sequence of SEQ ID NO: 937. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-23. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 710 and a VH comprising the amino acid sequence of SEQ ID NO: 937. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-23A. The VL may comprise the amino acid sequence of SEQ ID NO: 823. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-23A. The VH may comprise the amino acid sequence of SEQ ID NO: 1050. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-23A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 823 and a VH comprising the amino acid sequence of SEQ ID NO: 1050. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-23_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 937; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 710. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-23_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 710; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 937. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-23A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1050; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 823. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-23A_scFv_VL-VH. In some embodiments, the anti-

CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 823; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1050.

[00121] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-24 and ABL-CD3-24A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 24, 137, and 250, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 368, 481, and 597, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-24. The VL may comprise the amino acid sequence of SEQ ID NO: 711. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-24. The VH may comprise the amino acid sequence of SEQ ID NO: 938. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-24. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 711 and a VH comprising the amino acid sequence of SEQ ID NO: 938. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-24A. The VL may comprise the amino acid sequence of SEQ ID NO: 824. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-24A. The VH may comprise the amino acid sequence of SEQ ID NO: 1051. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-24A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 824 and a VH comprising the amino acid sequence of SEQ ID NO: 1051. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-24_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 938; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 711. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-24_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-

terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 711; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 938. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-24A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1051; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 824. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-24A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 824; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1051.

[00122] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-25 and ABL-CD3-25A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 25, 138, and 251, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 369, 482, and 598, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-25. The VL may comprise the amino acid sequence of SEQ ID NO: 712. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-25. The VH may comprise the amino acid sequence of SEQ ID NO: 939. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-25. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 712 and a VH comprising the amino acid sequence of SEQ ID NO: 939. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-25A. The VL may comprise the amino acid sequence of SEQ ID NO: 825. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-25A. The VH may comprise the amino acid sequence of SEQ ID NO: 1052. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-25A. In some embodiments, the anti-CD3

antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 825 and a VH comprising the amino acid sequence of SEQ ID NO: 1052. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-25_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 939; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 712. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-25_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 712; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 939. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-25A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1052; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 825. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-25A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 825; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1052.

[00123] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-26 and ABL-CD3-26A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 26, 139, and 252, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 370, 483, and 599, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-26. The VL may comprise the amino acid sequence of SEQ ID NO: 713. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-26. The VH may comprise the amino acid sequence of SEQ ID NO: 940. In some embodiments,

the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-26. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 713 and a VH comprising the amino acid sequence of SEQ ID NO: 940. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-26A. The VL may comprise the amino acid sequence of SEQ ID NO: 826. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-26A. The VH may comprise the amino acid sequence of SEQ ID NO: 1053. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-26A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 826 and a VH comprising the amino acid sequence of SEQ ID NO: 1053. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-26_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 940; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 713. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-26_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 713; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 940. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-26A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1053; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 826. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-26A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 826; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1053.

[00124] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-27. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 27, 140, and 253, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 371, 484, and 600, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-27A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 27, 140, and 253, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 371, 484, and 687, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-27. The VL may comprise the amino acid sequence of SEQ ID NO: 714. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-27. The VH may comprise the amino acid sequence of SEQ ID NO: 941. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-27. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 714 and a VH comprising the amino acid sequence of SEQ ID NO: 941. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-27A. The VL may comprise the amino acid sequence of SEQ ID NO: 827. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-27A. The VH may comprise the amino acid sequence of SEQ ID NO: 1054. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-27A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 827 and a VH comprising the amino acid sequence of SEQ ID NO: 1054. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-27_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 941; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 714. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-27_scFv_VL-VH. In some

embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 714; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 941. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-27A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1159. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-27A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1200.

[00125] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-28 and ABL-CD3-28A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 28, 141, and 254, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 372, 485, and 601, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-28. The VL may comprise the amino acid sequence of SEQ ID NO: 715. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-28. The VH may comprise the amino acid sequence of SEQ ID NO: 942. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-28. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 715 and a VH comprising the amino acid sequence of SEQ ID NO: 942. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-28A. The VL may comprise the amino acid sequence of SEQ ID NO: 828. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-28A. The VH may comprise the amino acid sequence of SEQ ID NO: 1055. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-28A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 828 and a VH comprising the amino acid sequence of SEQ ID NO: 1055. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-28_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or

antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 942; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 715. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-28_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 715; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 942. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-28A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1055; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 828. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-28A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 828; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1055.

[00126] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-29 and ABL-CD3-29A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 29, 142, and 255, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 373, 486, and 602, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-29. The VL may comprise the amino acid sequence of SEQ ID NO: 716. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-29. The VH may comprise the amino acid sequence of SEQ ID NO: 943. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-29. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 716 and a VH comprising the amino acid sequence of SEQ ID NO: 943. In some embodiments,

the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-29A. The VL may comprise the amino acid sequence of SEQ ID NO: 829. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-29A. The VH may comprise the amino acid sequence of SEQ ID NO: 1056. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-29A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 829 and a VH comprising the amino acid sequence of SEQ ID NO: 1056. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-29_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 943; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 716. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-29_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 716; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 943. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-29A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1160. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-29A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1201.

[00127] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-30 and ABL-CD3-30A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 30, 143, and 256, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 374, 487, and 603, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-30. The VL may comprise the amino acid sequence of SEQ ID NO: 717. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-30.

The VH may comprise the amino acid sequence of SEQ ID NO: 944. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-30. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 717 and a VH comprising the amino acid sequence of SEQ ID NO: 944. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-30A. The VL may comprise the amino acid sequence of SEQ ID NO: 830. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-30A. The VH may comprise the amino acid sequence of SEQ ID NO: 1057. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-30A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 830 and a VH comprising the amino acid sequence of SEQ ID NO: 1057. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-30_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 944; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 717. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-30_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 717; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 944. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-30A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1057; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 830. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-30A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 830; a linker comprising

the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1057.

[00128] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-31 and ABL-CD3-31A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 31, 144, and 257, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 375, 488, and 604, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-31. The VL may comprise the amino acid sequence of SEQ ID NO: 718. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-31. The VH may comprise the amino acid sequence of SEQ ID NO: 945. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-31. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 718 and a VH comprising the amino acid sequence of SEQ ID NO: 945. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-31A. The VL may comprise the amino acid sequence of SEQ ID NO: 831. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-31A. The VH may comprise the amino acid sequence of SEQ ID NO: 1058. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-31A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 831 and a VH comprising the amino acid sequence of SEQ ID NO: 1058. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-31_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 945; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 718. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-31_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 718; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein

n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 945. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-31A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1161. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-31A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1202.

[00129] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-32 and ABL-CD3-32A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 32, 145, and 258, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 376, 489, and 605, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-32. The VL may comprise the amino acid sequence of SEQ ID NO: 719. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-32. The VH may comprise the amino acid sequence of SEQ ID NO: 946. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-32. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 719 and a VH comprising the amino acid sequence of SEQ ID NO: 946. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-32A. The VL may comprise the amino acid sequence of SEQ ID NO: 832. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-32A. The VH may comprise the amino acid sequence of SEQ ID NO: 1059. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-32A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 832 and a VH comprising the amino acid sequence of SEQ ID NO: 1059. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-32_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 946; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising

the amino acid sequence of SEQ ID NO: 719. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-32_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 719; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 946. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-32A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1059; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 832. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-32A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 832; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1059.

[00130] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-33 and ABL-CD3-33A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 33, 146, and 259, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 377, 490, and 606, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-33. The VL may comprise the amino acid sequence of SEQ ID NO: 720. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-33. The VH may comprise the amino acid sequence of SEQ ID NO: 947. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-33. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 720 and a VH comprising the amino acid sequence of SEQ ID NO: 947. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-33A. The VL may comprise the amino acid sequence of SEQ ID NO: 833. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH

of antibody ABL-CD3-33A. The VH may comprise the amino acid sequence of SEQ ID NO: 1060. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-33A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 833 and a VH comprising the amino acid sequence of SEQ ID NO: 1060. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-33_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 947; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 720. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-33_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 720; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 947. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-33A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1060; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 833. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-33A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 833; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1060.

[00131] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-34 and ABL-CD3-34A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 34, 147, and 260, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 378, 491, and 607, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-34. The VL may

comprise the amino acid sequence of SEQ ID NO: 721. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-34. The VH may comprise the amino acid sequence of SEQ ID NO: 948. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-34. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 721 and a VH comprising the amino acid sequence of SEQ ID NO: 948. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-34A. The VL may comprise the amino acid sequence of SEQ ID NO: 834. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-34A. The VH may comprise the amino acid sequence of SEQ ID NO: 1061. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-34A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 834 and a VH comprising the amino acid sequence of SEQ ID NO: 1061. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-34_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 948; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 721. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-34_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 721; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 948. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-34A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1162. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-34A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1203.

[00132] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-35 and ABL-CD3-35A. The anti-CD3

antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 35, 148, and 261, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 379, 492, and 608, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-35. The VL may comprise the amino acid sequence of SEQ ID NO: 722. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-35. The VH may comprise the amino acid sequence of SEQ ID NO: 949. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-35. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 722 and a VH comprising the amino acid sequence of SEQ ID NO: 949. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-35A. The VL may comprise the amino acid sequence of SEQ ID NO: 835. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-35A. The VH may comprise the amino acid sequence of SEQ ID NO: 1062. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-35A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 835 and a VH comprising the amino acid sequence of SEQ ID NO: 1062. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-35_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 949; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 722. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-35_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 722; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 949. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-35A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid

sequence of SEQ ID NO: 1062; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 835. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-35A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 835; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1062.

[00133] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-36. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 36, 149, and 262, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 380, 493, and 609, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-36A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 36, 149, and 262, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 380, 571, and 609, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-36. The VL may comprise the amino acid sequence of SEQ ID NO: 723. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-36. The VH may comprise the amino acid sequence of SEQ ID NO: 950. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-36. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 723 and a VH comprising the amino acid sequence of SEQ ID NO: 950. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-36A. The VL may comprise the amino acid sequence of SEQ ID NO: 836. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-36A. The VH may comprise the amino acid sequence of SEQ ID NO: 1063. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-36A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid

sequence of SEQ ID NO: 836 and a VH comprising the amino acid sequence of SEQ ID NO: 1063. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-36_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 950; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 723. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-36_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 723; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 950. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-36A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1163. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-36A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1204.

[00134] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-37 and ABL-CD3-37A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 37, 150, and 263, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 381, 494, and 610, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-37. The VL may comprise the amino acid sequence of SEQ ID NO: 724. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-37. The VH may comprise the amino acid sequence of SEQ ID NO: 951. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-37. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 724 and a VH comprising the amino acid sequence of SEQ ID NO: 951. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-37A. The VL may comprise the amino acid sequence of SEQ ID NO: 837. In some

embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-37A. The VH may comprise the amino acid sequence of SEQ ID NO: 1064. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-37A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 837 and a VH comprising the amino acid sequence of SEQ ID NO: 1064. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-37_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 951; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 724. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-37_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 724; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 951. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-37A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1164. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-37A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1205.

[00135] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-38 and ABL-CD3-38A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 38, 151, and 264, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 382, 495, and 611, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-38. The VL may comprise the amino acid sequence of SEQ ID NO: 725. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-38. The VH may comprise the amino acid sequence of SEQ ID NO: 952. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of

antibody ABL-CD3-38. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 725 and a VH comprising the amino acid sequence of SEQ ID NO: 952. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-38A. The VL may comprise the amino acid sequence of SEQ ID NO: 838. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-38A. The VH may comprise the amino acid sequence of SEQ ID NO: 1065. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-38A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 838 and a VH comprising the amino acid sequence of SEQ ID NO: 1065. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-38_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 952; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 725. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-38_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 725; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 952. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-38A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1065; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 838. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-38A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 838; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1065.

[00136] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-39 and ABL-CD3-39A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 39, 152, and 265, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 383, 496, and 612, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-39. The VL may comprise the amino acid sequence of SEQ ID NO: 726. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-39. The VH may comprise the amino acid sequence of SEQ ID NO: 953. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-39. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 726 and a VH comprising the amino acid sequence of SEQ ID NO: 953. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-39A. The VL may comprise the amino acid sequence of SEQ ID NO: 839. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-39A. The VH may comprise the amino acid sequence of SEQ ID NO: 1066. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-39A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 839 and a VH comprising the amino acid sequence of SEQ ID NO: 1066. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-39_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 953; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 726. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-39_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 726; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 953. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-

CD3-39A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1165. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-39A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1206.

[00137] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-40 and ABL-CD3-40A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 40, 153, and 266, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 384, 497, and 613, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-40. The VL may comprise the amino acid sequence of SEQ ID NO: 727. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-40. The VH may comprise the amino acid sequence of SEQ ID NO: 954. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-40. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 727 and a VH comprising the amino acid sequence of SEQ ID NO: 954. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-40A. The VL may comprise the amino acid sequence of SEQ ID NO: 840. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-40A. The VH may comprise the amino acid sequence of SEQ ID NO: 1067. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-40A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 840 and a VH comprising the amino acid sequence of SEQ ID NO: 1067. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-40_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 954; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 727. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-40_scFv_VL-VH. In some

embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 727; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 954. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-40A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1166. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-40A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1207.

[00138] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-41. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 41, 154, and 267, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 385, 498, and 614, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-41A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 41, 154, and 340, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 385, 498, and 614, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-41. The VL may comprise the amino acid sequence of SEQ ID NO: 728. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-41. The VH may comprise the amino acid sequence of SEQ ID NO: 955. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-41. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 728 and a VH comprising the amino acid sequence of SEQ ID NO: 955. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-41A. The VL may comprise the amino acid sequence of SEQ ID NO: 841. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-41A. The VH may comprise the amino acid sequence of SEQ ID NO: 1068. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof,

comprises the VL and VH of antibody ABL-CD3-41A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 841 and a VH comprising the amino acid sequence of SEQ ID NO: 1068. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-41_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 955; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 728. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-41_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 728; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 955. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-41A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1167. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-41A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1208.

[00139] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-42 and ABL-CD3-42A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 42, 155, and 268, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 386, 499, and 615, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-42. The VL may comprise the amino acid sequence of SEQ ID NO: 729. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-42. The VH may comprise the amino acid sequence of SEQ ID NO: 956. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-42. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 729 and a VH comprising the amino acid sequence of SEQ ID NO: 956. In some embodiments,

the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-42A. The VL may comprise the amino acid sequence of SEQ ID NO: 842. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-42A. The VH may comprise the amino acid sequence of SEQ ID NO: 1069. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-42A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 842 and a VH comprising the amino acid sequence of SEQ ID NO: 1069. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-42_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 956; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 729. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-42_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 729; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 956. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-42A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1069; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 842. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-42A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 842; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1069.

[00140] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-43. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 43, 156, and 269, respectively; and an

HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 387, 500, and 616, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-43A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 43, 156, and 341, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 387, 500, and 616, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-43. The VL may comprise the amino acid sequence of SEQ ID NO: 730. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-43. The VH may comprise the amino acid sequence of SEQ ID NO: 957. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-43. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 730 and a VH comprising the amino acid sequence of SEQ ID NO: 957. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-43A. The VL may comprise the amino acid sequence of SEQ ID NO: 843. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-43A. The VH may comprise the amino acid sequence of SEQ ID NO: 1070. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-43A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 843 and a VH comprising the amino acid sequence of SEQ ID NO: 1070. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-43_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 957; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 730. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-43_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 730; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 957. In some

embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-43A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1168. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-43A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1209.

[00141] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-44 and ABL-CD3-44A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 44, 157, and 270, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 388, 501, and 617, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-44. The VL may comprise the amino acid sequence of SEQ ID NO: 731. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-44. The VH may comprise the amino acid sequence of SEQ ID NO: 958. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-44. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 731 and a VH comprising the amino acid sequence of SEQ ID NO: 958. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-44A. The VL may comprise the amino acid sequence of SEQ ID NO: 844. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-44A. The VH may comprise the amino acid sequence of SEQ ID NO: 1071. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-44A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 844 and a VH comprising the amino acid sequence of SEQ ID NO: 1071. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-44_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 958; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 731. In some embodiments, the anti-CD3 antibody,

or antigen-binding fragment thereof, comprises ABL-CD3-44_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 731; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 958. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-44A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1169. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-44A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1210.

[00142] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-45 and ABL-CD3-45A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 45, 158, and 271, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 389, 502, and 618, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-45. The VL may comprise the amino acid sequence of SEQ ID NO: 732. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-45. The VH may comprise the amino acid sequence of SEQ ID NO: 959. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-45. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 732 and a VH comprising the amino acid sequence of SEQ ID NO: 959. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-45A. The VL may comprise the amino acid sequence of SEQ ID NO: 845. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-45A. The VH may comprise the amino acid sequence of SEQ ID NO: 1072. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-45A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 845 and a VH comprising the amino acid sequence of SEQ ID NO: 1072. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof,

comprises ABL-CD3-45_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 959; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 732. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-45_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 732; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 959. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-45A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1170. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-45A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1211.

[00143] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-46 and ABL-CD3-46A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 46, 159, and 272, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 390, 503, and 619, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-46. The VL may comprise the amino acid sequence of SEQ ID NO: 733. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-46. The VH may comprise the amino acid sequence of SEQ ID NO: 960. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-46. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 733 and a VH comprising the amino acid sequence of SEQ ID NO: 960. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-46A. The VL may comprise the amino acid sequence of SEQ ID NO: 846. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-46A. The VH may comprise the amino acid sequence of SEQ ID NO:

1073. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-46A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 846 and a VH comprising the amino acid sequence of SEQ ID NO: 1073. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-46_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 960; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 733. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-46_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 733; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 960. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-46A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1073; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 846. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-46A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 846; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1073.

[00144] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-47 and ABL-CD3-47A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 47, 160, and 273, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 391, 504, and 620, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-47. The VL may comprise the amino acid sequence of SEQ ID NO: 734. In some embodiments, the anti-CD3

antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-47. The VH may comprise the amino acid sequence of SEQ ID NO: 961. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-47. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 734 and a VH comprising the amino acid sequence of SEQ ID NO: 961. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-47A. The VL may comprise the amino acid sequence of SEQ ID NO: 847. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-47A. The VH may comprise the amino acid sequence of SEQ ID NO: 1074. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-47A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 847 and a VH comprising the amino acid sequence of SEQ ID NO: 1074. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-47_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 961; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 734. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-47_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 734; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 961. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-47A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1171. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-47A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1212.

[00145] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-48 and ABL-CD3-48A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an

LCDR3 comprising the amino acid sequences of SEQ ID NOs: 48, 161, and 274, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 392, 505, and 621, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-48. The VL may comprise the amino acid sequence of SEQ ID NO: 735. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-48. The VH may comprise the amino acid sequence of SEQ ID NO: 962. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-48. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 735 and a VH comprising the amino acid sequence of SEQ ID NO: 962. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-48A. The VL may comprise the amino acid sequence of SEQ ID NO: 848. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-48A. The VH may comprise the amino acid sequence of SEQ ID NO: 1075. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-48A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 848 and a VH comprising the amino acid sequence of SEQ ID NO: 1075. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-48_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 962; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 735. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-48_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 735; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 962. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-48A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1075; a linker comprising the amino acid sequence of (Gly-Gly-Gly-

Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 848. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-48A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 848; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1075.

[00146] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-49. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 49, 162, and 275, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 393, 506, and 622, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-49A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 49, 162, and 342, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 393, 506, and 622, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-49. The VL may comprise the amino acid sequence of SEQ ID NO: 736. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-49. The VH may comprise the amino acid sequence of SEQ ID NO: 963. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-49. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 736 and a VH comprising the amino acid sequence of SEQ ID NO: 963. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-49A. The VL may comprise the amino acid sequence of SEQ ID NO: 849. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-49A. The VH may comprise the amino acid sequence of SEQ ID NO: 1076. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-49A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 849 and a VH comprising the amino acid sequence of SEQ ID NO:

1076. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-49_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 963; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 736. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-49_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 736; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 963. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-49A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1172. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-49A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1213.

[00147] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-50 and ABL-CD3-50A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 50, 163, and 276, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 394, 507, and 623, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-50. The VL may comprise the amino acid sequence of SEQ ID NO: 737. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-50. The VH may comprise the amino acid sequence of SEQ ID NO: 964. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-50. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 737 and a VH comprising the amino acid sequence of SEQ ID NO: 964. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-50A. The VL may comprise the amino acid sequence of SEQ ID NO: 850. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH

of antibody ABL-CD3-50A. The VH may comprise the amino acid sequence of SEQ ID NO: 1077. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-50A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 850 and a VH comprising the amino acid sequence of SEQ ID NO: 1077. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-50_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 964; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 737. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-50_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 737; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 964. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-50A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1077; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 850. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-50A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 850; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1077.

[00148] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-51 and ABL-CD3-51A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 51, 164, and 277, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 395, 508, and 624, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-51. The VL may

comprise the amino acid sequence of SEQ ID NO: 738. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-51. The VH may comprise the amino acid sequence of SEQ ID NO: 965. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-51. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 738 and a VH comprising the amino acid sequence of SEQ ID NO: 965. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-51A. The VL may comprise the amino acid sequence of SEQ ID NO: 851. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-51A. The VH may comprise the amino acid sequence of SEQ ID NO: 1078. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-51A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 851 and a VH comprising the amino acid sequence of SEQ ID NO: 1078. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-51_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 965; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 738. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-51_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 738; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 965. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-51A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1078; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 851. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-51A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-

terminus, a VL comprising the amino acid sequence of SEQ ID NO: 851; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1078.

[00149] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-52 and ABL-CD3-52A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 52, 165, and 278, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 396, 509, and 625, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-52. The VL may comprise the amino acid sequence of SEQ ID NO: 739. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-52. The VH may comprise the amino acid sequence of SEQ ID NO: 966. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-52. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 739 and a VH comprising the amino acid sequence of SEQ ID NO: 966. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-52A. The VL may comprise the amino acid sequence of SEQ ID NO: 852. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-52A. The VH may comprise the amino acid sequence of SEQ ID NO: 1079. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-52A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 852 and a VH comprising the amino acid sequence of SEQ ID NO: 1079. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-52_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 966; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 739. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-52_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 739; a linker

comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 966. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-52A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1173. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-52A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1214.

[00150] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-53 and ABL-CD3-53A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 53, 166, and 279, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 397, 510, and 626, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-53. The VL may comprise the amino acid sequence of SEQ ID NO: 740. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-53. The VH may comprise the amino acid sequence of SEQ ID NO: 967. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-53. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 740 and a VH comprising the amino acid sequence of SEQ ID NO: 967. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-53A. The VL may comprise the amino acid sequence of SEQ ID NO: 853. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-53A. The VH may comprise the amino acid sequence of SEQ ID NO: 1080. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-53A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 853 and a VH comprising the amino acid sequence of SEQ ID NO: 1080. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-53_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 967; a linker comprising the amino acid

sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 740. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-53_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 740; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 967. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-53A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1174. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-53A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1215.

[00151] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-54 and ABL-CD3-54A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 54, 167, and 280, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 398, 511, and 627, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-54. The VL may comprise the amino acid sequence of SEQ ID NO: 741. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-54. The VH may comprise the amino acid sequence of SEQ ID NO: 968. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-54. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 741 and a VH comprising the amino acid sequence of SEQ ID NO: 968. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-54A. The VL may comprise the amino acid sequence of SEQ ID NO: 854. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-54A. The VH may comprise the amino acid sequence of SEQ ID NO: 1081. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-54A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid

sequence of SEQ ID NO: 854 and a VH comprising the amino acid sequence of SEQ ID NO: 1081. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-54_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 968; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 741. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-54_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 741; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 968. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-54A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1081; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 854. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-54A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 854; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1081.

[00152] In some embodiments, , the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-55 and ABL-CD3-55A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 55, 168, and 281, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 399, 512, and 628, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-55. The VL may comprise the amino acid sequence of SEQ ID NO: 742. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-55. The VH may comprise the amino acid sequence of SEQ ID NO: 969. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of

antibody ABL-CD3-55. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 742 and a VH comprising the amino acid sequence of SEQ ID NO: 969. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-55A. The VL may comprise the amino acid sequence of SEQ ID NO: 855. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-55A. The VH may comprise the amino acid sequence of SEQ ID NO: 1082. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-55A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 855 and a VH comprising the amino acid sequence of SEQ ID NO: 1082. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-55_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 969; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 742. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-55_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 742; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 969. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-55A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1082; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 855. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-55A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 855; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1082.

[00153] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-56 and ABL-CD3-56A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 56, 169, and 282, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 400, 513, and 629, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-56. The VL may comprise the amino acid sequence of SEQ ID NO: 743. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-56. The VH may comprise the amino acid sequence of SEQ ID NO: 970. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-56. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 743 and a VH comprising the amino acid sequence of SEQ ID NO: 970. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-56A. The VL may comprise the amino acid sequence of SEQ ID NO: 856. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-56A. The VH may comprise the amino acid sequence of SEQ ID NO: 1083. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-56A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 856 and a VH comprising the amino acid sequence of SEQ ID NO: 1083. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-56_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 970; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 743. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-56_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 743; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 970. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-

CD3-56A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1175. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-56A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1216.

[00154] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-57 and ABL-CD3-57A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 57, 170, and 283, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 401, 514, and 630, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-57. The VL may comprise the amino acid sequence of SEQ ID NO: 744. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-57. The VH may comprise the amino acid sequence of SEQ ID NO: 971. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-57. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 744 and a VH comprising the amino acid sequence of SEQ ID NO: 971. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-57A. The VL may comprise the amino acid sequence of SEQ ID NO: 857. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-57A. The VH may comprise the amino acid sequence of SEQ ID NO: 1084. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-57A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 857 and a VH comprising the amino acid sequence of SEQ ID NO: 1084. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-57_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 971; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 744. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-57_scFv_VL-VH. In some

embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 744; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 971. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-57A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1176. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-57A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1217.

[00155] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-58 and ABL-CD3-58A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 58, 171, and 284, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 402, 515, and 631, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-58. The VL may comprise the amino acid sequence of SEQ ID NO: 745. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-58. The VH may comprise the amino acid sequence of SEQ ID NO: 972. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-58. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 745 and a VH comprising the amino acid sequence of SEQ ID NO: 972. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-58A. The VL may comprise the amino acid sequence of SEQ ID NO: 858. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-58A. The VH may comprise the amino acid sequence of SEQ ID NO: 1085. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-58A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 858 and a VH comprising the amino acid sequence of SEQ ID NO: 1085. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-58_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or

antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 972; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 745. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-58_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 745; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 972. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-58A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1085; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 858. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-58A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 858; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1085.

[00156] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-59 and ABL-CD3-59A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 59, 172, and 285, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 403, 516, and 632, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-59. The VL may comprise the amino acid sequence of SEQ ID NO: 746. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-59. The VH may comprise the amino acid sequence of SEQ ID NO: 973. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-59. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 746 and a VH comprising the amino acid sequence of SEQ ID NO: 973. In some embodiments,

the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-59A. The VL may comprise the amino acid sequence of SEQ ID NO: 859. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-59A. The VH may comprise the amino acid sequence of SEQ ID NO: 1086. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-59A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 859 and a VH comprising the amino acid sequence of SEQ ID NO: 1086. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-59_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 973; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 746. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-59_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 746; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 973. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-59A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1086; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 859. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-59A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 859; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1086.

[00157] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-60 and ABL-CD3-60A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 60, 173, and 286, respectively;

and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 404, 517, and 633, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-60. The VL may comprise the amino acid sequence of SEQ ID NO: 747. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-60. The VH may comprise the amino acid sequence of SEQ ID NO: 974. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-60. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 747 and a VH comprising the amino acid sequence of SEQ ID NO: 974. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-60A. The VL may comprise the amino acid sequence of SEQ ID NO: 860. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-60A. The VH may comprise the amino acid sequence of SEQ ID NO: 1087. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-60A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 860 and a VH comprising the amino acid sequence of SEQ ID NO: 1087. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-60_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 974; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 747. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-60_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 747; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 974. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-60A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1087; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence

of SEQ ID NO: 860. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-60A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 860; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1087.

[00158] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-61 and ABL-CD3-61A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 61, 174, and 287, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 405, 518, and 634, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-61. The VL may comprise the amino acid sequence of SEQ ID NO: 748. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-61. The VH may comprise the amino acid sequence of SEQ ID NO: 975. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-61. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 748 and a VH comprising the amino acid sequence of SEQ ID NO: 975. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-61A. The VL may comprise the amino acid sequence of SEQ ID NO: 861. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-61A. The VH may comprise the amino acid sequence of SEQ ID NO: 1088. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-61A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 861 and a VH comprising the amino acid sequence of SEQ ID NO: 1088. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-61_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 975; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 748. In some embodiments, the anti-CD3 antibody,

or antigen-binding fragment thereof, comprises ABL-CD3-61_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 748; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 975. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-61A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1177. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-61A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1218.

[00159] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-62 and ABL-CD3-62A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 62, 175, and 288, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 406, 519, and 635, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-62. The VL may comprise the amino acid sequence of SEQ ID NO: 749. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-62. The VH may comprise the amino acid sequence of SEQ ID NO: 976. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-62. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 749 and a VH comprising the amino acid sequence of SEQ ID NO: 976. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-62A. The VL may comprise the amino acid sequence of SEQ ID NO: 862. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-62A. The VH may comprise the amino acid sequence of SEQ ID NO: 1089. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-62A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 862 and a VH comprising the amino acid sequence of SEQ ID NO: 1089. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof,

comprises ABL-CD3-62_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 976; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 749. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-62_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 749; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 976. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-62A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1178. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-62A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1219.

[00160] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-63 and ABL-CD3-63A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 63, 176, and 289, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 407, 520, and 636, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-63. The VL may comprise the amino acid sequence of SEQ ID NO: 750. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-63. The VH may comprise the amino acid sequence of SEQ ID NO: 977. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-63. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 750 and a VH comprising the amino acid sequence of SEQ ID NO: 977. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-63A. The VL may comprise the amino acid sequence of SEQ ID NO: 863. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-63A. The VH may comprise the amino acid sequence of SEQ ID NO:

1090. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-63A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 863 and a VH comprising the amino acid sequence of SEQ ID NO: 1090. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-63_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 977; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 750. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-63_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 750; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 977. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-63A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1179. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-63A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1220.

[00161] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-64 and ABL-CD3-64A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 64, 177, and 290, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 408, 521, and 637, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-64. The VL may comprise the amino acid sequence of SEQ ID NO: 751. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-64. The VH may comprise the amino acid sequence of SEQ ID NO: 978. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-64. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 751

and a VH comprising the amino acid sequence of SEQ ID NO: 978. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-64A. The VL may comprise the amino acid sequence of SEQ ID NO: 864. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-64A. The VH may comprise the amino acid sequence of SEQ ID NO: 1091. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-64A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 864 and a VH comprising the amino acid sequence of SEQ ID NO: 1091. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-64_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 978; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 751. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-64_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 751; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 978. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-64A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1180. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-64A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1221.

[00162] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-65. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 65, 178, and 291, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 409, 522, and 638, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-65A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an

LCDR3 comprising the amino acid sequences of SEQ ID NOs: 65, 178, and 291, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 409, 572, and 638, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-65. The VL may comprise the amino acid sequence of SEQ ID NO: 752. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-65. The VH may comprise the amino acid sequence of SEQ ID NO: 979. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-65. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 752 and a VH comprising the amino acid sequence of SEQ ID NO: 979. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-65A. The VL may comprise the amino acid sequence of SEQ ID NO: 865. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-65A. The VH may comprise the amino acid sequence of SEQ ID NO: 1092. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-65A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 865 and a VH comprising the amino acid sequence of SEQ ID NO: 1092. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-65_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 979; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 752. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-65_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 752; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 979. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-65A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1181. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-

CD3-65A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1222.

[00163] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-66 and ABL-CD3-66A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 66, 179, and 292, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 410, 523, and 639, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-66. The VL may comprise the amino acid sequence of SEQ ID NO: 753. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-66. The VH may comprise the amino acid sequence of SEQ ID NO: 980. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-66. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 753 and a VH comprising the amino acid sequence of SEQ ID NO: 980. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-66A. The VL may comprise the amino acid sequence of SEQ ID NO: 866. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-66A. The VH may comprise the amino acid sequence of SEQ ID NO: 1093. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-66A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 866 and a VH comprising the amino acid sequence of SEQ ID NO: 1093. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-66_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 980; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 753. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-66_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 753; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein

n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 980. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-66A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1182. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-66A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1223.

[00164] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-67 and ABL-CD3-67A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 67, 180, and 293, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 411, 524, and 640, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-67. The VL may comprise the amino acid sequence of SEQ ID NO: 754. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-67. The VH may comprise the amino acid sequence of SEQ ID NO: 981. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-67. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 754 and a VH comprising the amino acid sequence of SEQ ID NO: 981. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-67A. The VL may comprise the amino acid sequence of SEQ ID NO: 867. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-67A. The VH may comprise the amino acid sequence of SEQ ID NO: 1094. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-67A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 867 and a VH comprising the amino acid sequence of SEQ ID NO: 1094. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-67_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 981; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising

the amino acid sequence of SEQ ID NO: 754. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-67_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 754; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 981. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-67A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1094; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 867. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-67A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 867; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1094.

[00165] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-68 and ABL-CD3-68A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 68, 181, and 294, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 412, 525, and 641, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-68. The VL may comprise the amino acid sequence of SEQ ID NO: 755. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-68. The VH may comprise the amino acid sequence of SEQ ID NO: 982. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-68. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 755 and a VH comprising the amino acid sequence of SEQ ID NO: 982. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-68A. The VL may comprise the amino acid sequence of SEQ ID NO: 868. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH

of antibody ABL-CD3-68A. The VH may comprise the amino acid sequence of SEQ ID NO: 1095. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-68A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 868 and a VH comprising the amino acid sequence of SEQ ID NO: 1095. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-68_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 982; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 755. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-68_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 755; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 982. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-68A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1183. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-68A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1224.

[00166] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-69 and ABL-CD3-69A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 69, 182, and 295, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 413, 526, and 642, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-69. The VL may comprise the amino acid sequence of SEQ ID NO: 756. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-69. The VH may comprise the amino acid sequence of SEQ ID NO: 983. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-69. In some embodiments, the anti-CD3 antibody, or antigen-binding

fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 756 and a VH comprising the amino acid sequence of SEQ ID NO: 983. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-69A. The VL may comprise the amino acid sequence of SEQ ID NO: 869. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-69A. The VH may comprise the amino acid sequence of SEQ ID NO: 1096. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-69A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 869 and a VH comprising the amino acid sequence of SEQ ID NO: 1096. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-69_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 983; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 756. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-69_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 756; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 983. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-69A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1096; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 869. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-69A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 869; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1096.

[00167] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-70 and ABL-CD3-70A. The anti-CD3

antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 70, 183, and 296, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 414, 527, and 643, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-70. The VL may comprise the amino acid sequence of SEQ ID NO: 757. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-70. The VH may comprise the amino acid sequence of SEQ ID NO: 984. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-70. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 757 and a VH comprising the amino acid sequence of SEQ ID NO: 984. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-70A. The VL may comprise the amino acid sequence of SEQ ID NO: 870. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-70A. The VH may comprise the amino acid sequence of SEQ ID NO: 1097. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-70A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 870 and a VH comprising the amino acid sequence of SEQ ID NO: 1097. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-70_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 984; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 757. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-70_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 757; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 984. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-70A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid

sequence of SEQ ID NO: 1097; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 870. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-70A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 870; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1097.

[00168] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-71 and ABL-CD3-71A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 71, 184, and 297, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 415, 528, and 644, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-71. The VL may comprise the amino acid sequence of SEQ ID NO: 758. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-71. The VH may comprise the amino acid sequence of SEQ ID NO: 985. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-71. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 758 and a VH comprising the amino acid sequence of SEQ ID NO: 985. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-71A. The VL may comprise the amino acid sequence of SEQ ID NO: 871. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-71A. The VH may comprise the amino acid sequence of SEQ ID NO: 1098. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-71A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 871 and a VH comprising the amino acid sequence of SEQ ID NO: 1098. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-71_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 985; a linker comprising the amino acid

sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 758. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-71_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 758; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 985. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-71A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1184. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-71A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1225.

[00169] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-72 and ABL-CD3-72A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 72, 185, and 298, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 416, 529, and 645, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-72. The VL may comprise the amino acid sequence of SEQ ID NO: 759. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-72. The VH may comprise the amino acid sequence of SEQ ID NO: 986. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-72. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 759 and a VH comprising the amino acid sequence of SEQ ID NO: 986. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-72A. The VL may comprise the amino acid sequence of SEQ ID NO: 872. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-72A. The VH may comprise the amino acid sequence of SEQ ID NO: 1099. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-72A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid

sequence of SEQ ID NO: 872 and a VH comprising the amino acid sequence of SEQ ID NO: 1099. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-72_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 986; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 759. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-72_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 759; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 986. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-72A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1185. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-72A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1226.

[00170] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-73 and ABL-CD3-73A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 73, 186, and 299, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 417, 530, and 646, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-73. The VL may comprise the amino acid sequence of SEQ ID NO: 760. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-73. The VH may comprise the amino acid sequence of SEQ ID NO: 987. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-73. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 760 and a VH comprising the amino acid sequence of SEQ ID NO: 987. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-73A. The VL may comprise the amino acid sequence of SEQ ID NO: 873. In some

embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-73A. The VH may comprise the amino acid sequence of SEQ ID NO: 1100. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-73A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 873 and a VH comprising the amino acid sequence of SEQ ID NO: 1100. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-73_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 987; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 760. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-73_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 760; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 987. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-73A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1100; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 873. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-73A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 873; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1100.

[00171] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-74 and ABL-CD3-74A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 74, 187, and 300, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 418, 531, and 647, respectively. In some embodiments, the anti-CD3 antibody, or

antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-74. The VL may comprise the amino acid sequence of SEQ ID NO: 761. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-74. The VH may comprise the amino acid sequence of SEQ ID NO: 988. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-74. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 761 and a VH comprising the amino acid sequence of SEQ ID NO: 988. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-74A. The VL may comprise the amino acid sequence of SEQ ID NO: 874. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-74A. The VH may comprise the amino acid sequence of SEQ ID NO: 1101. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-74A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 874 and a VH comprising the amino acid sequence of SEQ ID NO: 1101. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-74_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 988; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 761. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-74_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 761; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 988. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-74A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1186. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-74A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1227.

[00172] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-75 and ABL-CD3-75A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 75, 188, and 301, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 419, 532, and 648, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-75. The VL may comprise the amino acid sequence of SEQ ID NO: 762. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-75. The VH may comprise the amino acid sequence of SEQ ID NO: 989. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-75. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 762 and a VH comprising the amino acid sequence of SEQ ID NO: 989. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-75A. The VL may comprise the amino acid sequence of SEQ ID NO: 875. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-75A. The VH may comprise the amino acid sequence of SEQ ID NO: 1102. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-75A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 875 and a VH comprising the amino acid sequence of SEQ ID NO: 1102. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-75_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 989; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 762. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-75_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 762; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 989. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-

CD3-75A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1102; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 875. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-75A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 875; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1102.

[00173] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-76 and ABL-CD3-76A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 76, 189, and 302, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 420, 533, and 649, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-76. The VL may comprise the amino acid sequence of SEQ ID NO: 763. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-76. The VH may comprise the amino acid sequence of SEQ ID NO: 990. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-76. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 763 and a VH comprising the amino acid sequence of SEQ ID NO: 990. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-76A. The VL may comprise the amino acid sequence of SEQ ID NO: 876. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-76A. The VH may comprise the amino acid sequence of SEQ ID NO: 1103. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-76A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 876 and a VH comprising the amino acid sequence of SEQ ID NO: 1103. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-76_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or

antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 990; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 763. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-76_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 763; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 990. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-76A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1187. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-76A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1228.

[00174] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-77 and ABL-CD3-77A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 77, 190, and 303, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 421, 534, and 650, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-77. The VL may comprise the amino acid sequence of SEQ ID NO: 764. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-77. The VH may comprise the amino acid sequence of SEQ ID NO: 991. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-77. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 764 and a VH comprising the amino acid sequence of SEQ ID NO: 991. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-77A. The VL may comprise the amino acid sequence of SEQ ID NO: 877. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-77A. The VH may comprise the amino acid sequence of SEQ ID NO: 1104. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof,

comprises the VL and VH of antibody ABL-CD3-77A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 877 and a VH comprising the amino acid sequence of SEQ ID NO: 1104. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-77_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 991; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 764. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-77_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 764; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 991. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-77A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1188. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-77A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1229.

[00175] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-78 and ABL-CD3-78A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 78, 191, and 304, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 422, 535, and 651, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-78. The VL may comprise the amino acid sequence of SEQ ID NO: 765. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-78. The VH may comprise the amino acid sequence of SEQ ID NO: 992. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-78. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 765 and a VH comprising the amino acid sequence of SEQ ID NO: 992. In some embodiments,

the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-78A. The VL may comprise the amino acid sequence of SEQ ID NO: 878. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-78A. The VH may comprise the amino acid sequence of SEQ ID NO: 1105. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-78A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 878 and a VH comprising the amino acid sequence of SEQ ID NO: 1105. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-78_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 992; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 765. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-78_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 765; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 992. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-78A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1105; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 878. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-78A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 878; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1105.

[00176] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-79. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 79, 192, and 305, respectively; and an

HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 423, 536, and 652, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-79A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 79, 192, and 305, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 423, 573, and 652, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-79. The VL may comprise the amino acid sequence of SEQ ID NO: 766. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-79. The VH may comprise the amino acid sequence of SEQ ID NO: 993. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-79. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 766 and a VH comprising the amino acid sequence of SEQ ID NO: 993. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-79A. The VL may comprise the amino acid sequence of SEQ ID NO: 879. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-79A. The VH may comprise the amino acid sequence of SEQ ID NO: 1106. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-79A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 879 and a VH comprising the amino acid sequence of SEQ ID NO: 1106. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-79_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 993; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 766. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-79_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 766; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 993. In some

embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-79A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1189. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-79A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1230.

[00177] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-80 and ABL-CD3-80A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 80, 193, and 306, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 424, 537, and 653, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-80. The VL may comprise the amino acid sequence of SEQ ID NO: 767. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-80. The VH may comprise the amino acid sequence of SEQ ID NO: 994. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-80. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 767 and a VH comprising the amino acid sequence of SEQ ID NO: 994. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-80A. The VL may comprise the amino acid sequence of SEQ ID NO: 880. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-80A. The VH may comprise the amino acid sequence of SEQ ID NO: 1107. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-80A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 880 and a VH comprising the amino acid sequence of SEQ ID NO: 1107. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-80_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 994; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 767. In some embodiments, the anti-CD3 antibody,

or antigen-binding fragment thereof, comprises ABL-CD3-80_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 767; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 994. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-80A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1107; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 880. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-80A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 880; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1107.

[00178] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-81 and ABL-CD3-81A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 81, 194, and 307, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 425, 538, and 654, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-81. The VL may comprise the amino acid sequence of SEQ ID NO: 768. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-81. The VH may comprise the amino acid sequence of SEQ ID NO: 995. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-81. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 768 and a VH comprising the amino acid sequence of SEQ ID NO: 995. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-81A. The VL may comprise the amino acid sequence of SEQ ID NO: 881. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-81A. The VH may comprise the amino acid sequence of SEQ ID NO:

1108. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-81A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 881 and a VH comprising the amino acid sequence of SEQ ID NO: 1108. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-81_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 995; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 768. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-81_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 768; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 995. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-81A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1190. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-81A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1231.

[00179] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-82 and ABL-CD3-82A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 82, 195, and 308, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 426, 539, and 655, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-82. The VL may comprise the amino acid sequence of SEQ ID NO: 769. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-82. The VH may comprise the amino acid sequence of SEQ ID NO: 996. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-82. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 769

and a VH comprising the amino acid sequence of SEQ ID NO: 996. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-82A. The VL may comprise the amino acid sequence of SEQ ID NO: 882. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-82A. The VH may comprise the amino acid sequence of SEQ ID NO: 1109. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-82A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 882 and a VH comprising the amino acid sequence of SEQ ID NO: 1109. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-82_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 996; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 769. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-82_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 769; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 996. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-82A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1109; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 882. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-82A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 882; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1109.

[00180] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-83 and ABL-CD3-83A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an

LCDR3 comprising the amino acid sequences of SEQ ID NOs: 83, 196, and 309, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 427, 540, and 656, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-83. The VL may comprise the amino acid sequence of SEQ ID NO: 770. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-83. The VH may comprise the amino acid sequence of SEQ ID NO: 997. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-83. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 770 and a VH comprising the amino acid sequence of SEQ ID NO: 997. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-83A. The VL may comprise the amino acid sequence of SEQ ID NO: 883. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-83A. The VH may comprise the amino acid sequence of SEQ ID NO: 1110. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-83A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 883 and a VH comprising the amino acid sequence of SEQ ID NO: 1110. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-83_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 997; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 770. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-83_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 770; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 997. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-83A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1110; a linker comprising the amino acid sequence of (Gly-Gly-Gly-

Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 883. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-83A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 883; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1110.

[00181] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-84 and ABL-CD3-84A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 84, 197, and 310, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 428, 541, and 657, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-84. The VL may comprise the amino acid sequence of SEQ ID NO: 771. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-84. The VH may comprise the amino acid sequence of SEQ ID NO: 998. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-84. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 771 and a VH comprising the amino acid sequence of SEQ ID NO: 998. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-84A. The VL may comprise the amino acid sequence of SEQ ID NO: 884. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-84A. The VH may comprise the amino acid sequence of SEQ ID NO: 1111. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-84A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 884 and a VH comprising the amino acid sequence of SEQ ID NO: 1111. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-84_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 998; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising

the amino acid sequence of SEQ ID NO: 771. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-84_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 771; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 998. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-84A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1111; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 884. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-84A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 884; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1111.

[00182] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-85. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 85, 198, and 311, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 429, 542, and 658, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-85A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 85, 198, and 343, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 429, 542, and 658, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-85B. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 85, 198, and 344, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 429, 542, and 658, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-85.

The VL may comprise the amino acid sequence of SEQ ID NO: 772. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-85. The VH may comprise the amino acid sequence of SEQ ID NO: 999. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-85. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 772 and a VH comprising the amino acid sequence of SEQ ID NO: 999. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-85A. The VL may comprise the amino acid sequence of SEQ ID NO: 885. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-85A. The VH may comprise the amino acid sequence of SEQ ID NO: 1112. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-85A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 885 and a VH comprising the amino acid sequence of SEQ ID NO: 1112. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-85B. The VL may comprise the amino acid sequence of SEQ ID NO: 886. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-85B. The VH may comprise the amino acid sequence of SEQ ID NO: 1113. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-85B. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 886 and a VH comprising the amino acid sequence of SEQ ID NO: 1113. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-85_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 999; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 772. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-85_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 772; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO:

999. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-85A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1191. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-85A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1232. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-85B_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1192. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-85B_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1233.

[00183] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-86 and ABL-CD3-86A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 86, 199, and 312, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 430, 543, and 659, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-86. The VL may comprise the amino acid sequence of SEQ ID NO: 773. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-86. The VH may comprise the amino acid sequence of SEQ ID NO: 1000. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-86. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 773 and a VH comprising the amino acid sequence of SEQ ID NO: 1000. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-86A. The VL may comprise the amino acid sequence of SEQ ID NO: 887. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-86A. The VH may comprise the amino acid sequence of SEQ ID NO: 1114. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-86A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 887 and a VH comprising the amino acid sequence of SEQ ID NO:

1114. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-86_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1000; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 773. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-86_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 773; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1000. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-86A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1114; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 887. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-87A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 887; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1114.

[00184] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-87 and ABL-CD3-87A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 87, 200, and 313, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 431, 544, and 660, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-87. The VL may comprise the amino acid sequence of SEQ ID NO: 774. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-87. The VH may comprise the amino acid sequence of SEQ ID NO: 1001. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-87. In some embodiments, the anti-CD3 antibody, or antigen-binding

fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 774 and a VH comprising the amino acid sequence of SEQ ID NO: 1001. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-87A. The VL may comprise the amino acid sequence of SEQ ID NO: 888. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-87A. The VH may comprise the amino acid sequence of SEQ ID NO: 1115. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-87A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 888 and a VH comprising the amino acid sequence of SEQ ID NO: 1115. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-87_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1001; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 774. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-87_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 774; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1001. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-87A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1193. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-87A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1234.

[00185] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-88 and ABL-CD3-88A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 88, 201, and 314, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 432, 545, and 661, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-88. The VL may

comprise the amino acid sequence of SEQ ID NO: 775. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-88. The VH may comprise the amino acid sequence of SEQ ID NO: 1002. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-88. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 775 and a VH comprising the amino acid sequence of SEQ ID NO: 1002. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-88A. The VL may comprise the amino acid sequence of SEQ ID NO: 889. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-88A. The VH may comprise the amino acid sequence of SEQ ID NO: 1116. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-88A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 889 and a VH comprising the amino acid sequence of SEQ ID NO: 1116. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-88_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1002; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 775. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-88_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 775; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1002. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-88A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1194. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-88A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1235.

[00186] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-89 and ABL-CD3-89A. The anti-CD3

antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 89, 202, and 315, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 433, 546, and 662, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-89. The VL may comprise the amino acid sequence of SEQ ID NO: 776. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-89. The VH may comprise the amino acid sequence of SEQ ID NO: 1003. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-89. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 776 and a VH comprising the amino acid sequence of SEQ ID NO: 1003. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-89A. The VL may comprise the amino acid sequence of SEQ ID NO: 890. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-89A. The VH may comprise the amino acid sequence of SEQ ID NO: 1117. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-89A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 890 and a VH comprising the amino acid sequence of SEQ ID NO: 1117. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-89_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1003; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 776. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-89_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 776; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1003. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-89A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1195. In some

embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-89A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the amino acid sequence of SEQ ID NO: 1236.

[00187] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-90 and ABL-CD3-90A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 90, 203, and 316, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 434, 547, and 663, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-90. The VL may comprise the amino acid sequence of SEQ ID NO: 777. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-90. The VH may comprise the amino acid sequence of SEQ ID NO: 1004. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-90. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 777 and a VH comprising the amino acid sequence of SEQ ID NO: 1004. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-90A. The VL may comprise the amino acid sequence of SEQ ID NO: 891. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-90A. The VH may comprise the amino acid sequence of SEQ ID NO: 1118. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-90A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 891 and a VH comprising the amino acid sequence of SEQ ID NO: 1118. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-90_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1004; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 777. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-90_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 777; a linker

comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1004. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-90A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1118; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 891. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-90A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 891; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1118.

[00188] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-91 and ABL-CD3-91A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 91, 204, and 317, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 435, 548, and 664, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-91. The VL may comprise the amino acid sequence of SEQ ID NO: 778. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-91. The VH may comprise the amino acid sequence of SEQ ID NO: 1005. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-91. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 778 and a VH comprising the amino acid sequence of SEQ ID NO: 1005. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-91A. The VL may comprise the amino acid sequence of SEQ ID NO: 892. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-91A. The VH may comprise the amino acid sequence of SEQ ID NO: 1119. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-91A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid

sequence of SEQ ID NO: 892 and a VH comprising the amino acid sequence of SEQ ID NO: 1119. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-91_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1005; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 778. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-91_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 778; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1005. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-91A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1119; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 892. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-91A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 892; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1119.

[00189] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-92 and ABL-CD3-92A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 92, 205, and 318, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 436, 549, and 665, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-92. The VL may comprise the amino acid sequence of SEQ ID NO: 779. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-92. The VH may comprise the amino acid sequence of SEQ ID NO: 1006. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of

antibody ABL-CD3-92. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 779 and a VH comprising the amino acid sequence of SEQ ID NO: 1006. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-92A. The VL may comprise the amino acid sequence of SEQ ID NO: 893. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-92A. The VH may comprise the amino acid sequence of SEQ ID NO: 1120. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-92A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 893 and a VH comprising the amino acid sequence of SEQ ID NO: 1120. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-92_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1006; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 779. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-92_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 779; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1006. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-92A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1120; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 893. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-92A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 893; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1120.

[00190] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-93 and ABL-CD3-93A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 93, 206, and 319, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 437, 550, and 666, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-93. The VL may comprise the amino acid sequence of SEQ ID NO: 780. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-93. The VH may comprise the amino acid sequence of SEQ ID NO: 1007. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-93. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 780 and a VH comprising the amino acid sequence of SEQ ID NO: 1007. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-93A. The VL may comprise the amino acid sequence of SEQ ID NO: 894. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-93A. The VH may comprise the amino acid sequence of SEQ ID NO: 1121. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-93A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 894 and a VH comprising the amino acid sequence of SEQ ID NO: 1121. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-93_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1007; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 780. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-93_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 780; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1007. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-

CD3-93A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1121; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 894. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-93A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 894; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1121.

[00191] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-94 and ABL-CD3-94A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 94, 207, and 320, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 438, 551, and 667, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-94. The VL may comprise the amino acid sequence of SEQ ID NO: 781. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-94. The VH may comprise the amino acid sequence of SEQ ID NO: 1008. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-94. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 781 and a VH comprising the amino acid sequence of SEQ ID NO: 1008. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-94A. The VL may comprise the amino acid sequence of SEQ ID NO: 895. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-94A. The VH may comprise the amino acid sequence of SEQ ID NO: 1122. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-94A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 895 and a VH comprising the amino acid sequence of SEQ ID NO: 1122. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-94_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or

antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1008; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 781. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-94_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 781; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1008. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-94A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1122; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 895. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-94A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 895; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1122.

[00192] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-95 and ABL-CD3-95A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 95, 208, and 321, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 439, 552, and 668, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-95. The VL may comprise the amino acid sequence of SEQ ID NO: 782. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-95. The VH may comprise the amino acid sequence of SEQ ID NO: 1009. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-95. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 782 and a VH comprising the amino acid sequence of SEQ ID NO: 1009. In some embodiments,

the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-95A. The VL may comprise the amino acid sequence of SEQ ID NO: 896. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-95A. The VH may comprise the amino acid sequence of SEQ ID NO: 1123. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-95A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 896 and a VH comprising the amino acid sequence of SEQ ID NO: 1123. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-95_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1009; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 782. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-95_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 782; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1009. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-95A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1123; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 896. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-95A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 896; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1123.

[00193] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-96 and ABL-CD3-96A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 96, 209, and 322, respectively;

and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 440, 553, and 669, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-96. The VL may comprise the amino acid sequence of SEQ ID NO: 783. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-96. The VH may comprise the amino acid sequence of SEQ ID NO: 1010. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-96. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 783 and a VH comprising the amino acid sequence of SEQ ID NO: 1010. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-96A. The VL may comprise the amino acid sequence of SEQ ID NO: 897. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-96A. The VH may comprise the amino acid sequence of SEQ ID NO: 1124. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-96A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 897 and a VH comprising the amino acid sequence of SEQ ID NO: 1124. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-96_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1010; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 783. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-96_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 783; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1010. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-96A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1124; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence

of SEQ ID NO: 897. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-96A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 897; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1124.

[00194] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-97 and ABL-CD3-97A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 97, 210, and 323, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 441, 554, and 670, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-97. The VL may comprise the amino acid sequence of SEQ ID NO: 784. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-97. The VH may comprise the amino acid sequence of SEQ ID NO: 1011. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-97. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 784 and a VH comprising the amino acid sequence of SEQ ID NO: 1011. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-97A. The VL may comprise the amino acid sequence of SEQ ID NO: 898. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-97A. The VH may comprise the amino acid sequence of SEQ ID NO: 1125. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-97A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 898 and a VH comprising the amino acid sequence of SEQ ID NO: 1125. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-97_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1011; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 784. In some embodiments, the anti-CD3 antibody,

or antigen-binding fragment thereof, comprises ABL-CD3-97_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 784; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1011. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-97A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1125; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 898. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-97A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 898; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1125.

[00195] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-98 and ABL-CD3-98A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 98, 211, and 324, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 442, 555, and 671, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-98. The VL may comprise the amino acid sequence of SEQ ID NO: 785. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-98. The VH may comprise the amino acid sequence of SEQ ID NO: 1012. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-98. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 785 and a VH comprising the amino acid sequence of SEQ ID NO: 1012. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-98A. The VL may comprise the amino acid sequence of SEQ ID NO: 899. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-98A. The VH may comprise the amino acid sequence of SEQ ID NO:

1126. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-98A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 899 and a VH comprising the amino acid sequence of SEQ ID NO: 1126. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-98_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1012; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 785. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-98_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 785; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1012. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-98A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1126; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 899. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-98A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 899; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1126.

[00196] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-99 and ABL-CD3-99A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 99, 212, and 325, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 443, 556, and 672, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-99. The VL may comprise the amino acid sequence of SEQ ID NO: 786. In some embodiments, the anti-CD3

antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-99. The VH may comprise the amino acid sequence of SEQ ID NO: 1013. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-99. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 786 and a VH comprising the amino acid sequence of SEQ ID NO: 1013. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-99A. The VL may comprise the amino acid sequence of SEQ ID NO: 900. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-99A. The VH may comprise the amino acid sequence of SEQ ID NO: 1127. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-99A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 900 and a VH comprising the amino acid sequence of SEQ ID NO: 1127. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-99_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1013; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 786. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-99_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 786; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1013. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-99A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1127; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 900. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-99A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 900; a linker comprising

the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1127.

[00197] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-100 and ABL-CD3-100A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 100, 213, and 326, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 444, 557, and 673, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-100. The VL may comprise the amino acid sequence of SEQ ID NO: 787. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-100. The VH may comprise the amino acid sequence of SEQ ID NO: 1014. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-100. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 787 and a VH comprising the amino acid sequence of SEQ ID NO: 1014. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-100A. The VL may comprise the amino acid sequence of SEQ ID NO: 901. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-100A. The VH may comprise the amino acid sequence of SEQ ID NO: 1128. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-100A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 901 and a VH comprising the amino acid sequence of SEQ ID NO: 1128. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-100_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1014; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 787. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-100_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 787; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ

ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1014. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-100A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1128; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 901. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-100A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 901; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1128.

[00198] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-101 and ABL-CD3-101A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 101, 214, and 327, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 445, 558, and 674, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-101. The VL may comprise the amino acid sequence of SEQ ID NO: 788. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-101. The VH may comprise the amino acid sequence of SEQ ID NO: 1015. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-101. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 788 and a VH comprising the amino acid sequence of SEQ ID NO: 1015. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-101A. The VL may comprise the amino acid sequence of SEQ ID NO: 902. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-101A. The VH may comprise the amino acid sequence of SEQ ID NO: 1129. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-101A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 902 and a VH comprising the amino acid

sequence of SEQ ID NO: 1129. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-101_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1015; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 788. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-101_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 788; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1015. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-101A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1129; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 902. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-101A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 902; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1129.

[00199] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-102 and ABL-CD3-102A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 102, 215, and 328, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 446, 559, and 675, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-102. The VL may comprise the amino acid sequence of SEQ ID NO: 789. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-102. The VH may comprise the amino acid sequence of SEQ ID NO: 1016. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-102. In some embodiments, the anti-CD3 antibody, or

antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 789 and a VH comprising the amino acid sequence of SEQ ID NO: 1016. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-102A. The VL may comprise the amino acid sequence of SEQ ID NO: 903. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-102A. The VH may comprise the amino acid sequence of SEQ ID NO: 1130. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-102A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 903 and a VH comprising the amino acid sequence of SEQ ID NO: 1130. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-102_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1016; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 789. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-102_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 789; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1016. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-102A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1130; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 903. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-102A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 903; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1130.

[00200] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-103 and ABL-CD3-103A. The anti-

CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 103, 216, and 329, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 447, 560, and 676, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-103. The VL may comprise the amino acid sequence of SEQ ID NO: 790. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-103. The VH may comprise the amino acid sequence of SEQ ID NO: 1017. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-103. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 790 and a VH comprising the amino acid sequence of SEQ ID NO: 1017. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-103A. The VL may comprise the amino acid sequence of SEQ ID NO: 904. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-103A. The VH may comprise the amino acid sequence of SEQ ID NO: 1131. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-103A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 904 and a VH comprising the amino acid sequence of SEQ ID NO: 1131. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-103_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1017; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 790. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-103_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 790; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1017. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-103A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH

comprising the amino acid sequence of SEQ ID NO: 1131; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 904. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-103A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 904; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1131.

[00201] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-104 and ABL-CD3-104A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 104, 217, and 330, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 448, 561, and 677, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-104. The VL may comprise the amino acid sequence of SEQ ID NO: 791. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-104. The VH may comprise the amino acid sequence of SEQ ID NO: 1018. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-104. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 791 and a VH comprising the amino acid sequence of SEQ ID NO: 1018. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-104A. The VL may comprise the amino acid sequence of SEQ ID NO: 905. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-104A. The VH may comprise the amino acid sequence of SEQ ID NO: 1132. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-104A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 905 and a VH comprising the amino acid sequence of SEQ ID NO: 1132. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-104_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1018; a linker comprising

the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 791. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-104_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 791; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1018. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-104A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1132; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 905. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-104A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 905; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1132.

[00202] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-105 and ABL-CD3-105A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 105, 218, and 331, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 449, 562, and 678, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-105. The VL may comprise the amino acid sequence of SEQ ID NO: 792. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-105. The VH may comprise the amino acid sequence of SEQ ID NO: 1019. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-105. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 792 and a VH comprising the amino acid sequence of SEQ ID NO: 1019. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-105A. The VL may comprise the amino acid sequence of SEQ ID NO:

906. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-105A. The VH may comprise the amino acid sequence of SEQ ID NO: 1133. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-105A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 906 and a VH comprising the amino acid sequence of SEQ ID NO: 1133. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-105_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1019; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 792. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-105_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 792; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1019. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-105A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1133; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 906. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-105A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 906; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1133.

[00203] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-106 and ABL-CD3-106A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 106, 219, and 332, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 450, 563, and 679, respectively. In some embodiments, the anti-CD3

antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-106. The VL may comprise the amino acid sequence of SEQ ID NO: 793. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-106. The VH may comprise the amino acid sequence of SEQ ID NO: 1020. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-106. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 793 and a VH comprising the amino acid sequence of SEQ ID NO: 1020. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-106A. The VL may comprise the amino acid sequence of SEQ ID NO: 907. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-106A. The VH may comprise the amino acid sequence of SEQ ID NO: 1134. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-106A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 907 and a VH comprising the amino acid sequence of SEQ ID NO: 1134. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-106_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1020; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 793. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-106_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 793; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1020. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-106A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1134; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 907. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-106A_scFv_VL-VH. In some

embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 907; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1134.

[00204] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-107 and ABL-CD3-107A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 107, 220, and 333, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 451, 564, and 680, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-107. The VL may comprise the amino acid sequence of SEQ ID NO: 794. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-107. The VH may comprise the amino acid sequence of SEQ ID NO: 1021. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-107. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 794 and a VH comprising the amino acid sequence of SEQ ID NO: 1021. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-107A. The VL may comprise the amino acid sequence of SEQ ID NO: 908. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-107A. The VH may comprise the amino acid sequence of SEQ ID NO: 1135. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-107A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 908 and a VH comprising the amino acid sequence of SEQ ID NO: 1135. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-107_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1021; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 794. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-107_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof,

comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 794; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1021. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-107A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1135; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 908. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-107A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 908; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1135.

[00205] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-108 and ABL-CD3-108A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 108, 221, and 334, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 452, 565, and 681, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-108. The VL may comprise the amino acid sequence of SEQ ID NO: 795. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-108. The VH may comprise the amino acid sequence of SEQ ID NO: 1022. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-108. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 795 and a VH comprising the amino acid sequence of SEQ ID NO: 1022. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-108A. The VL may comprise the amino acid sequence of SEQ ID NO: 909. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-108A. The VH may comprise the amino acid sequence of SEQ ID NO: 1136. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-108A. In some

embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 909 and a VH comprising the amino acid sequence of SEQ ID NO: 1136. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-108_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1022; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 795. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-108_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 795; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1022. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-108A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1136; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 909. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-108A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 909; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1136.

[00206] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-109 and ABL-CD3-109A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 109, 222, and 335, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 453, 566, and 682, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-109. The VL may comprise the amino acid sequence of SEQ ID NO: 796. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-109. The VH may comprise the amino acid sequence of SEQ ID NO: 1023. In

some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-109. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 796 and a VH comprising the amino acid sequence of SEQ ID NO: 1023. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-109A. The VL may comprise the amino acid sequence of SEQ ID NO: 910. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-109A. The VH may comprise the amino acid sequence of SEQ ID NO: 1137. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-109A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 910 and a VH comprising the amino acid sequence of SEQ ID NO: 1137. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-109_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1023; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 796. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-109_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 796; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1023. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-109A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1137; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 910. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-109A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 910; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1137.

[00207] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-110 and ABL-CD3-110A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 110, 223, and 336, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 454, 567, and 683, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-110. The VL may comprise the amino acid sequence of SEQ ID NO: 797. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-110. The VH may comprise the amino acid sequence of SEQ ID NO: 1024. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-110. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 797 and a VH comprising the amino acid sequence of SEQ ID NO: 1024. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-110A. The VL may comprise the amino acid sequence of SEQ ID NO: 911. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-110A. The VH may comprise the amino acid sequence of SEQ ID NO: 1138. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-110A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 911 and a VH comprising the amino acid sequence of SEQ ID NO: 1138. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-110_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1024; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 797. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-110_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 797; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1024. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof,

comprises ABL-CD3-110A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1138; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 911. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-110A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 911; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1138.

[00208] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-111 and ABL-CD3-111A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 111, 224, and 337, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 455, 568, and 684, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-111. The VL may comprise the amino acid sequence of SEQ ID NO: 798. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-111. The VH may comprise the amino acid sequence of SEQ ID NO: 1025. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-111. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 798 and a VH comprising the amino acid sequence of SEQ ID NO: 1025. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-111A. The VL may comprise the amino acid sequence of SEQ ID NO: 912. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-111A. The VH may comprise the amino acid sequence of SEQ ID NO: 1139. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-111A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 912 and a VH comprising the amino acid sequence of SEQ ID NO: 1139. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-111_scFv_VH-VL. In some embodiments,

the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1025; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 798. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-111_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 798; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1025. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-111A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1139; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 912. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-111A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 912; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1139.

[00209] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-112 and ABL-CD3-112A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 112, 225, and 338, respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 456, 569, and 685, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-112. The VL may comprise the amino acid sequence of SEQ ID NO: 799. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-112. The VH may comprise the amino acid sequence of SEQ ID NO: 1026. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-112. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 799 and a VH comprising the amino acid sequence of SEQ ID NO: 1026. In some

embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-112A. The VL may comprise the amino acid sequence of SEQ ID NO: 913. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-112A. The VH may comprise the amino acid sequence of SEQ ID NO: 1140. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-112A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 913 and a VH comprising the amino acid sequence of SEQ ID NO: 1140. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-112_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1026; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 799. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-112_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 799; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1026. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-112A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1140; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 913. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-112A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 913; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1140.

[00210] In some embodiments the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the six CDRs of antibody ABL-CD3-113 and ABL-CD3-113A. The anti-CD3 antibody, or antigen-binding fragment thereof, may comprise an LCDR1, an LCDR2, and an LCDR3 comprising the amino acid sequences of SEQ ID NOs: 113, 226, and 339,

respectively; and an HCDR1, an HCDR2, and an HCDR3 comprising the amino acid sequences of SEQ ID NOs: 457, 570, and 686, respectively. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-113. The VL may comprise the amino acid sequence of SEQ ID NO: 800. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-113. The VH may comprise the amino acid sequence of SEQ ID NO: 1027. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-113. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 800 and a VH comprising the amino acid sequence of SEQ ID NO: 1027. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL of antibody ABL-CD3-113A. The VL may comprise the amino acid sequence of SEQ ID NO: 914. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VH of antibody ABL-CD3-113A. The VH may comprise the amino acid sequence of SEQ ID NO: 1141. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises the VL and VH of antibody ABL-CD3-113A. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a VL comprising the amino acid sequence of SEQ ID NO: 914 and a VH comprising the amino acid sequence of SEQ ID NO: 1141. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-113_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1027; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising the amino acid sequence of SEQ ID NO: 800. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-113_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 800; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1027. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-113A_scFv_VH-VL. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VH comprising the amino acid sequence of SEQ ID NO: 1141; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VL comprising

the amino acid sequence of SEQ ID NO: 914. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises ABL-CD3-113A_scFv_VL-VH. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises, from N-terminus to C-terminus, a VL comprising the amino acid sequence of SEQ ID NO: 914; a linker comprising the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4; and a VH comprising the amino acid sequence of SEQ ID NO: 1141.

[00211] In some embodiments, the VL comprises an amino acid sequence of one of SEQ ID NOs: 688-914. In some embodiments, the VH comprises an amino acid sequence of one of SEQ ID NOs: 915-1141. In some embodiments, the VL comprises an amino acid sequence of one of SEQ ID NOs: 688-914, and the VH comprises an amino acid sequence of one of SEQ ID NOs: 915-1141. In some embodiments, the VH and the VL are from the same anti-CD3 AlivaMab® Antibody.

[00212] In some embodiments, an anti-CD3 antibody, or an antigen-binding fragment thereof, of the disclosure is human. In some embodiments, the human anti-CD3 antibody, or an antigen-binding fragment thereof, comprises a human IgH chain and a human Igκ chain. In some embodiments, the human anti-CD3 antibody, or an antigen-binding fragment thereof, comprises a human IgH chain and a human Igλ chain. In some embodiments, the isotype of the anti-CD3 antibody is selected from IgM, IgD, IgG (such as IgG1, IgG2, IgG3, and IgG4), IgA and IgE. In some embodiments, the isotype of the anti-CD3 antibody is IgG. In some embodiments, the isotype of the anti-CD3 antibody is selected from IgG1, IgG2, IgG3, and IgG4.

[00213] In some embodiments, the anti-CD3 antibody binds an Fc receptor (FcR) selected from an FcγR, an FcεR, and an FcαR. In some embodiments, the anti-CD3 antibody binds an FcγR selected from FcγRI (CD64), FcγRII (CD32), and FcγRIII (CD16), including isoforms thereof. In some embodiments, the Fc domain of the anti-CD3 antibody comprises a mutation so that it preferentially binds a particular FcγR (see, e.g., U.S. 6,737,056 and U.S. 2015/0031862).

[00214] In some embodiments, the anti-CD3 antibody has reduced effector function. The anti-CD3 antibody may exhibit reduced binding to an Fc receptor (FcR) selected from an FcγR, an FcεR, and an FcαR. In some embodiments, the anti-CD3 antibody exhibits reduced binding to an FcγR selected from FcγRI (CD64), FcγRII (CD32), and FcγRIII (CD16), including isoforms thereof. In some embodiments, the Fc domain of the anti-CD3 antibody comprises a mutation so that reduces binding a particular FcγR.

[00215] The anti-CD3 antibody may have no effector function. In some embodiments, the anti-CD3 antibody does not bind an Fc receptor (FcR) selected from an FcγR, an FcεR, and an FcαR. In some embodiments, the anti-CD3 antibody does not bind an FcγR selected from FcγRI (CD64), FcγRII (CD32), and FcγRIII (CD16), including isoforms thereof. In some embodiments, the Fc domain of the anti-CD3 antibody comprises a mutation so that it does not bind a particular FcγR. The engineering of antibodies to reduce or eliminate effector function is well-known in the art (*see, e.g.*, Stewart et at (2014) JITC 2:29, Dumet C. *et al. MAbs*, 2019, vol. 11(8): 1341-1350; and Desjarlais, JR. and Lazar, GA, *Exp. Cell. Res.*, 2011, vol. 317(9): 1278-1285; *see also* WO 89/07142; WO 94/28027; WO 94/29351; WO 95/26403; WO 2000/42072; WO 2004/029207; WO 2005/018572; WO 2005/007809; WO 2011/066501; WO 2011/149999; WO 2012/130831; WO 2014/121087; WO 2017/079369; WO 2018/071919; US 8,961,967; US 10,259,887; US 10,501,543; US 2006/0134105).

[00216] In some embodiments, the Fc domain of an antibody disclosed herein comprises one or more amino acid modifications that reduces or eliminates one or more effector functions. In some embodiments, the modified Fc domain is derived from an IgG1 Fc domain. Optionally, the modified Fc domain is derived from an IgG1 constant region. The modified Fc domain may be derived from an IgG2 Fc domain. In some embodiments, the modified Fc domain is derived from an IgG2 constant region. The modified Fc domain may be derived from an IgG4 Fc domain region. In some embodiments, the modified Fc domain is derived from an IgG4 constant region. In some embodiments, the modified Fc domain is derived from a combination of Fc domains from more than one isotype of constant region.

[00217] In some embodiments, the antibody comprises a modified Fc domain derived from an IgG1 molecule, wherein the modified Fc domain comprises an amino acid modification at any one of the positions selected from the group consisting of E216, R217, K218, C219, C220, C226, C229, P230, E233, L234, L235, G236, G237, P238, S239, V240, F241, K246, L251, T260, D265, V266, H268, W277, N297, E318, K322, P329, A330, P331, Q347, N348, T350, L351, K360, T366, N390, K392, T394, D399, S400, F405, Y407, K409, T411 or a combination such amino acid modifications, wherein the numbering of amino acid residues is according to the EU index as set forth in Edelman GM *et al.*, *Proc. Natl. Acad. USA*, 63, 78-85 (1969). In preferred embodiments, the modified Fc domain derived from IgG1 comprises an amino acid modification selected from the group consisting of C220S, C226S, C229S, P230S, E233P, L234A, L234F, L234V, L235A, L235E, L235V, G236E, G237A, P238S, D265S, D265A, H268Q, W277T, N297G, N297Q, N297D, N297A, E318A, K322A,

P329G, P329A, A330S, P331S, Q347R, Q347E, Q347K, T350V, L351Y, K360D, K360E, T366A, T366I, T366L, T366M, T366V, N390R, N390K, N390D, K392V, K392M, K392R, K392L, K392F, K392E, T394W, D399R, D399W, D399K, S400E, S400D, S400R, S400K, F405A, F405I, F405M, F405T, F405S, F405V, F405W, Y407A, Y407I, Y407L, Y407V, K409F, K409I, K409S, K409W, T411N, T411R, T411Q, T411K, T411D, T411E, T411W, ΔE216-E222, K246R/L251E/T260R, InR234/235, InV235/236, InR236/237, InR237/238, InV238/239, InN238/239, InL238/239, InE238/239, InG238/239, InS239/240, InG240/241, InE240/241, InG240/241, InL238/239/P238Q, InE238/239/N348A, InS239/240/V266A, and InR237/238/G236A or a combination thereof.

[00218] In some embodiments, the antibody comprises a modified Fc domain derived from an IgG2 molecule, wherein the modified Fc domain comprises an amino acid modification at any one of the positions selected from the group consisting of V234, G237, P238, H268, V309, A330, and P331 or a combination thereof, wherein the numbering of amino acid residues is according to the EU numbering as set forth in Edelman. In preferred embodiments, modified Fc domain derived from IgG2 comprises an amino acid modification selected from the group consisting of V234A, G237A, P238S, H268Q, H268A, V309L, A330S, P331S, or a combination thereof.

[00219] In some embodiments, the antibody comprises a modified Fc domain derived from an IgG4 molecule, wherein the modified Fc domain comprises an amino acid modification at any one of the positions selected from the group consisting of S228, L235, L236, G237, E318, and N297 or a combination thereof, wherein the numbering of amino acid residues is according to the EU index as set forth in Edelman GM *et al.*, *Proc. Natl. Acad. USA*, 63, 78-85 (1969). In preferred embodiments, the modified Fc domain derived from IgG4 comprises an amino acid modification selected from the group consisting of S228P, L235A, L235E, L236E, G237A, E318A, and N297Q or a combination thereof.

Bispecific Antibodies

[00220] One aspect of the present disclosure provides a bispecific antibody. In some embodiments, the bispecific antibody comprises an anti-CD3 antibody, or antigen-binding fragment thereof, disclosed herein. In some embodiments, the bispecific antibody comprises an anti-CD3 antibody, or antigen-binding fragment thereof, disclosed herein and a targeting antibody, or an antigen-binding fragment thereof. In some embodiments, the targeting antibody, or antigen-binding fragment thereof, is an anti-tumor antibody, or an antigen-binding fragment thereof.

[00221] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a single-chain Fv (scFv). In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a single-chain Fv (scFv) operably linked to a first Fc domain. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a Fab fragment. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a Fab fragment operably linked to a first Fc domain. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a Fab'. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a Fab' operably linked to a first Fc domain. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a $F(ab')_2$. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a $F(ab')_2$ operably linked to a first Fc domain. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises an Fv. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises an Fv operably linked to a first Fc domain. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a complete heavy chain, comprising a first Fc domain. As used herein, a complete heavy chain includes heavy chains that do not contain all of their amino acid residues as a result of C-terminal clipping. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a complete light chain. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, comprises a complete heavy chain, comprising a first Fc domain, and a complete light chain.

[00222] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, is operably linked to the first Fc domain via a first linker. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, is operably linked to the N-terminus of the first Fc domain. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, is operably linked to the C-terminus of the first Fc domain. In some embodiments, the first linker is an antibody hinge region. In some embodiments, the first linker is a variable length Gly-Ser linker. In some embodiments, the first linker comprises a linker selected from the group consisting of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1238), (Ser-Ser-Ser-Ser-Gly)n (SEQ ID NO: 1147), (Gly-Ser-Ser-Gly-Gly)n (SEQ ID NO: 1148), and (Gly-Gly-Ser-Gly-Gly)n (SEQ ID NO: 1149), where n is an integer between 1 and 5. In some embodiments, the first linker comprises the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1237), wherein n is 1. In some embodiments, the linker comprises the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4.

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[00223] In some embodiments, the targeting antibody in the anti-CD3 bispecific antibody is an anti-tumor antibody, or an antigen-binding fragment thereof. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, comprises a single-chain Fv (scFv). In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, comprises a single-chain Fv (scFv) operably linked to a second Fc domain. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, comprises a Fab fragment. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, comprises a Fab fragment operably linked to a second Fc domain. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, comprises a Fab'. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, comprises a Fab' operably linked to a second Fc domain. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, comprises a $F(ab')_2$. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, comprises a $F(ab')_2$ operably linked to a second Fc domain. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, comprises an Fv. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, comprises an Fv operably linked to a second Fc domain. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, comprises a complete heavy chain, comprising a second Fc domain. As used herein, a complete heavy chain includes heavy chains that do not contain all of their amino acid residues as a result of C-terminal clipping. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, comprises a complete light chain. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, comprises a complete heavy chain, comprising a second Fc domain, and a complete light chain.

[00224] In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, is operably linked to the second Fc domain via a second linker. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, is operably linked to the N-terminus of the second Fc domain. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, is operably linked to the C-terminus of the second Fc domain. In some embodiments, the second linker is an antibody hinge region. In some embodiments, the second linker is a variable length Gly-Ser linker. In some embodiments, the second linker comprises a linker selected from the group consisting of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1238), (Ser-Ser-Ser-Ser-Gly)n (SEQ ID NO: 1147), (Gly-Ser-Ser-Gly-Gly)n (SEQ ID NO: 1148), and (Gly-Gly-Ser-Gly-Gly)n (SEQ ID NO: 1149), where n is an integer between 1 and 5. In some embodiments, the second linker comprises the amino acid sequence of (Gly-Gly-

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Gly-Gly-Ser)n (SEQ ID NO: 1237), wherein n is 1. In some embodiments, the second linker comprises the amino acid sequence of (Gly-Gly-Gly-Gly-Ser)n (SEQ ID NO: 1146), wherein n is 4.

[00225] It is known in the art the mutations can be introduced into the Fc domains of bispecific antibodies to promote heterodimerization over homodimerization. *See, e.g.*, Ha, JH *et al.*, "Immunoglobulin Fc heterodimer platform technology: from design to applications in therapeutic antibodies and proteins," *Front. Immunol.* 2016, vol. 7: 394, incorporated by reference herein in its entirety. Such mutations include "knobs-into-holes" (KIH) mutations; HA-TF (and related) mutations; skew mutations; ZW mutations; 7.8.60 (and related) mutations; DD-KK (and related) mutations; EW-RVT mutations; EW-RVT$_{S-S}$ mutations; SEED mutations, A107 mutations, Duobody mutations and Crossmab mutations. In some embodiments, the first Fc domain is derived from an IgG1 constant region. In some embodiments, the second Fc domain is derived from an IgG1 constant region. In some embodiments, the first and second Fc domains are derived from IgG1 constant regions.

[00226] In some embodiments, the first and second Fc domains comprise KIH mutations. S*ee, e.g.*, Ridgway JB *et al.*, *Protein Eng* (1996) 9(7):617–21; Atwell S *et al.*, *J Mol Biol* (1997) 270(1):26–35; and Merchant et al., *Nat Biotechnol*, 1998, 16:677-81, each of which is incorporated by reference herein. Non-limiting examples of "knob" mutations include S354C and T366W. Non-limiting examples of "hole" mutations include Y349C, T366S, L368A, and Y407V. The "hole" may be further mutated to eliminate protein A binding (H435R/Y436F). In this way, the knob-containing Fc domain can bind to protein A, and the hole-containing Fc can bind to Fab-selective resins, offering multiple purification options.

[00227] In some embodiments, the first Fc domain comprises a T366W mutation and the second Fc domain comprises T366S/L368A/Y407V mutations. In some embodiments, the first Fc domain comprises T366S/L368A/Y407V mutations and the second Fc domain comprises a T366W mutation. In some embodiments, the first and second Fc domains comprise KIH$_{S-S}$ mutations. In some embodiments, the first Fc domain comprises S354C/T366W mutations and the second Fc domain comprises Y349C/T366S/L368A/Y407V mutations. In some embodiments, the first Fc domain comprises Y349C/T366S/L368A/Y407V mutations and the second Fc domain comprises S354C/T366W mutation. In some embodiments, the first Fc domain comprises S354C/T366W mutations and the second Fc domain comprises Y349C/T366S/L368A/Y407V/H435R/Y436F mutations. In some embodiments, the first Fc domain comprises Y349C/T366S/L368A/ Y407V/H435R/Y436F mutations and the second Fc domain comprises S354C/T366W

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mutation. In some embodiments, the first Fc domain comprises S354C/T366W/H435R/Y436F mutations and the second Fc domain comprises Y349C/T366S/L368A/Y407V mutations. In some embodiments, the first Fc domain comprises Y349C/T366S/L368A/Y407V mutations and the second Fc domain comprises S354C/T366W/H435R/Y436F mutations. Each of the foregoing mutations is according to EU numbering.

[00228] In some embodiments, the knob-containing Fc domain comprises the amino acid sequence DKTHTCPPCPAPEFEGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWY VDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPASIEK TISKAKGQPREPQVYTLPPCREEMTKNQVSLWCLVKGFYPSDIAVEWESNGQPENNY KTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ ID NO: 1142). In some embodiments, the hole-containing Fc domain comprises the amino sequence DKTHTCPPCPAPEFEGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWY VDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPASIEK TISKAKGQPREPQVCTLPPSREEMTKNQVSLSCAVKGFYPSDIAVEWESNGQPENNY KTTPPVLDSDGSFFLVSKLTVDKSRWQQGNVFSCSVMHEALHNRFTQKSLSLSPGK (SEQ ID NO: 1143). In some embodiments, the first Fc domain comprises the amino acid sequence of SEQ ID NO: 1142. In some embodiments, the first Fc domain comprises the amino acid sequence of SEQ ID NO: 1143. In some embodiments, the second Fc domain comprises the amino acid sequence of SEQ ID NO: 1142. In some embodiments, the second Fc domain comprises the amino acid sequence of SEQ ID NO: 1143. In some embodiments, the first and second Fc domains comprise the amino acid sequences of SEQ ID NOs: 1142 and 1143, respectively. In some embodiments, the first and second Fc domains comprise the amino acid sequences of SEQ ID NOs: 1143 and 1142, respectively.

[00229] In some embodiments, the knob-containing constant region comprises the amino acid sequence of ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQ SSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSC DKTHTCPPCPAPEFEGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWY VDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPASIEK TISKAKGQPREPQVYTLPPCREEMTKNQVSLWCLVKGFYPSDIAVEWESNGQPENNY KTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ ID NO: 1144). In some embodiments, the hole-containing constant region comprises the

amino acid sequence of ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQ SSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPEF EGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKP REEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPASIEKTISKAKGQPREPQV CTLPPSREEMTKNQVSLSCAVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFL VSKLTVDKSRWQQGNVFSCSVMHEALHNRFTQKSLSLSPGK (SEQ ID NO: 1145). In some embodiments, the anti-CD3 antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1144. In some embodiments, the anti-CD3 antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1145. In some embodiments, the anti-tumor antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1144. In some embodiments, the anti-tumor antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1145. In some embodiments, the anti-CD3 antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1144, and the anti-tumor antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1145. In some embodiments, the anti-CD3 antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1145, and the anti-tumor antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1144.

[00230] In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1144. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1145. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1144. In some embodiments, the anti-tumor antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1145. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1144, and the anti-tumor antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1145. In some embodiments, the anti-CD3 antibody, or antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1145, and the anti-tumor antibody, or

antigen-binding fragment thereof, is operably linked to a constant region comprising the amino acid sequence of SEQ ID NO: 1144.

[00231] In some embodiments, the first and second Fc domains comprise HA-TF and related mutations. *See, e,g.*, Moore GL, *et al.*, *MAbs* (2011) 3(6):546–57, incorporated herein by reference. In some embodiments, the first Fc domain comprises a S364H mutation, and the second Fc domain comprises a Y349T mutation. In some embodiments, the first Fc domain comprises a Y349T mutation, and the second Fc domain comprises a S364H mutation. In some embodiments, the first Fc domain comprises a F405A mutation, and the second Fc domain comprises a T394F mutation. In some embodiments, the first Fc domain comprises a T394F mutation, and the second Fc domain comprises a F405A mutation. In some embodiments, the first Fc domain comprises S364H/T394F mutations, and the second Fc domain comprises Y349T/F405A mutations. In some embodiments, the first Fc domain comprises Y349T/F405A mutations, and the second Fc domain comprises S364H/T394F mutations. In some embodiments, the first Fc domain comprises S364H/F405A mutations and the second Fc domain Y349T/T394F mutations. In some embodiments, the first Fc domain comprises Y349T/T394F mutations and the second Fc domain S364H/F405A mutations. Each of the foregoing mutations is according to EU numbering.

[00232] In some embodiments, the first and second Fc domains comprise skew mutations. *See, e.g.*, U.S. Patent 10,793,632, incorporated herein by reference. In some embodiments, the first Fc domain comprises S364K/E357Q mutations, and the second Fc domain comprises L368D/K370S mutations. In some embodiments, the first Fc domain comprises L368D/K370S mutations, and the second Fc domain comprises S364K/E357Q mutations. In some embodiments, the first Fc domain comprises L368D/K370S mutations, and the second Fc domain comprises a S364K mutation. In some embodiments, the first Fc domain comprises a S364K mutation, and the second Fc domain comprises L368D/K370S mutations. In some embodiments, the first Fc domain comprises L368E/K370S mutations, and the second Fc domain comprises a S364K mutation. In some embodiments, the first Fc domain comprises a S364K mutation, and the second Fc domain comprises L368E/K370S mutations. In some embodiments, the first Fc domain comprises T411E/K360E/Q362E mutations, and the second Fc domain comprises a D401K mutation. In some embodiments, the first Fc domain comprises a D401K mutation, and the second Fc domain comprises T411E/K360E/Q362E mutations. In some embodiments, the first Fc domain comprises L368D/K370S mutations, and the second Fc domain comprises S364K/E357L mutations. In some embodiments, the first Fc domain comprises S364K/E357L mutations, and the second Fc domain comprises L368D/K370S

mutations. In some embodiments, the first Fc domain comprises a K370S mutation, and the second Fc domain comprises S364K/E357Q mutations. In some embodiments, the first Fc domain comprises S364K/E357Q mutations, and the second Fc domain comprises a K370S mutation. In some embodiments, the first Fc domain comprises T366S/L368A/Y407V mutations, and the second Fc domain comprises a T366W mutation. In some embodiments, the first Fc domain comprises a T366W mutation, and the second Fc domain comprises T366S/L368A/Y407V mutations. In some embodiments, the first Fc domain comprises T366S/L368A/Y407V/Y349C mutations, and the second Fc domain comprises T366W/S354C mutations. In some embodiments, the first Fc domain comprises T366W/S354C mutations, and the second Fc domain comprises T366S/L368A/Y407V/Y349C mutations. Each of the foregoing mutations is according to EU numbering.

[00233] In some embodiments, the first and second Fc domains comprise ZW mutations. *See, e.g.*, Von Kreudenstein TS, *et al.*, *MAbs* (2013) 5(5):646–54, incorporated herein by reference. In some embodiments, the first Fc domain comprises F405A/Y407V mutations, and the second Fc domain comprises a T394W mutation. In some embodiments, the first Fc domain comprises a T394W mutation, and the second Fc domain comprises F405A/Y407V mutations. In some embodiments, the first Fc domain comprises F405A/Y407V mutations, and the second Fc domain comprises T366I/T394W mutations. In some embodiments, the first Fc domain comprises T366I/T394W mutations, and the second Fc domain comprises F405A/Y407V mutations. In some embodiments, the first Fc domain comprises F405A/Y407V mutations, and the second Fc domain comprises T366L/T394W mutations. In some embodiments, the first Fc domain comprises T366L/T394W mutations, and the second Fc domain comprises F405A/Y407V mutations. In some embodiments, the first Fc domain comprises F405A/Y407V mutations, and the second Fc domain comprises T366L/K392M/T394W mutations. In some embodiments, the first Fc domain comprises T366L/K392M/T394W mutations, and the second Fc domain comprises F405A/Y407V mutations. In some embodiments, the first Fc domain comprises L351Y/F405A/Y407V mutations, and the second Fc domain comprises T366L/K329M/T394W mutations. In some embodiments, the first Fc domain comprises T366L/K329M/T394W mutations, and the second Fc domain comprises L351Y/F405A/Y407V mutations. In some embodiments, the first Fc domain comprises T350V/L351Y/F405A/Y407V mutations, and the second Fc domain comprises T350V/T366L/K392M/T394W mutations. In some embodiments, the first Fc domain comprises T350V/T366L/K392M/T394W mutations, and the second Fc domain comprises T350V/L351Y/F405A/Y407V mutations. In some embodiments, the first Fc domain

comprises T350V/L351Y/F405A/Y407V mutations, and the second Fc domain comprises T350V/T366L/K392L/T394W mutations. In some embodiments, the first Fc domain comprises T350V/T366L/K392L/T394W mutations, and the second Fc domain comprises T350V/L351Y/F405A/Y407V mutations. Each of the foregoing mutations is according to EU numbering.

[00234] In some embodiments, the first and second Fc domains comprise 7.8.60 mutations or related mutations. *See, e.g.*, Leaver-Fay A, *et al.*, *Structure* (2016) 24(4):641–51, incorporated herein by reference. In some embodiments, the first Fc domain comprises D399M/Y407A mutations, and the second Fc domain comprises T366V/K409V mutations. In some embodiments, the first Fc domain comprises T366V/K409V mutations, and the second Fc domain comprises D399M/Y407A mutations. In some embodiments, the first Fc domain comprises K360D/D399M/Y407A mutations, and the second Fc domain comprises E345R/Q347R/T366V/K409V mutations. In some embodiments, the first Fc domain comprises E345R/Q347R/T366V/K409V mutations, and the second Fc domain comprises K360D/D399M/Y407A mutations. In some embodiments, the first Fc domain comprises Y349S/K370Y/T366V/K409V mutations, and the second Fc domain comprises E357D/S364Q/Y407A mutations. In some embodiments, the first Fc domain comprises E357D/S364Q/Y407A mutations, and the second Fc domain comprises Y349S/K370Y/T366V/K409V mutations. In some embodiments, the first Fc domain comprises Y349S/K370Y/T366M/K409V mutations, and the second Fc domain comprises E356G/E357D/S364Q/Y407A mutations. In some embodiments, the first Fc domain comprises E356G/E357D/S364Q/Y407A mutations, and the second Fc domain comprises Y349S/K370Y/T366M/K409V mutations. In some embodiments, the first Fc domain comprises Y349S/K370Y/T366M/K409V mutations, and the second Fc domain comprises E357D/S364R/Y407A mutations. In some embodiments, the first Fc domain comprises E357D/S364R/Y407A mutations, and the second Fc domain comprises Y349S/K370Y/T366M/K409V mutations. Each of the foregoing mutations is according to EU numbering.

[00235] In some embodiments, the first and second Fc domains comprise DD-KK mutations or related mutations. *See, e.g.*, Gunasekaran K, *et al.*, *J Biol Chem* (2010) 285(25):19637–46, incorporated herein by reference. In some embodiments, the first Fc domain comprises K409D/K392D mutations, and the second Fc domain comprises D399K/E356K mutations. In some embodiments, the first Fc domain comprises D399K/E356K mutations, and the second Fc domain comprises K409D/K392D mutations. In

some embodiments, the first Fc domain comprises K409E/K392D mutations, and the second Fc domain comprises D399R/E356K mutations. In some embodiments, the first Fc domain comprises D399R/E356K mutations, and the second Fc domain comprises K409E/K392D mutations. In some embodiments, the first Fc domain comprises K409D/K392D mutations, and the second Fc domain comprises D399R/E356K mutations. In some embodiments, the first Fc domain comprises D399R/E356K mutations, and the second Fc domain comprises K409D/K392D mutations. In some embodiments, the first Fc domain comprises K409E/K392D mutations, and the second Fc domain comprises D399K/E356K mutations. In some embodiments, the first Fc domain comprises D399K/E356K mutations, and the second Fc domain comprises K409E/K392D mutations. In some embodiments, the first Fc domain comprises K409D/K392D/K370D mutations, and the second Fc domain comprises D399K/E356K/E357K mutations. In some embodiments, the first Fc domain comprises D399K/E356K/E357K mutations, and the second Fc domain comprises K409D/K392D/K370D mutations. Each of the foregoing mutations is according to EU numbering.

[00236] In some embodiments, the first and second Fc domains comprise EW-RVT mutations or related mutations. *See, e.g.*, Choi HJ, *et al.*, *Mol Cancer Ther* (2013) 12(12):2748–59 and Choi HJ, *et al.*, *Mol Immunol* (2015) 65(2):377–83, each of which is incorporated herein by reference. In some embodiments, the first Fc domain comprises a K409W mutation, and the second Fc domain comprises F405T/D399V mutations. In some embodiments, the first Fc domain comprises F405T/D399V mutations, and the second Fc domain comprises a K409W mutation. In some embodiments, the first Fc domain comprises K360E/K409W mutations, and the second Fc domain comprises Q347R/D399V/F405T mutations. In some embodiments, the first Fc domain comprises Q347R/D399V/F405T mutations, and the second Fc domain comprises K360E/K409W mutations. In some embodiments, the first Fc domain comprises K360E/K409W/Y349C mutations, and the second Fc domain comprises Q347R/D399V/F405T/S354C mutations. In some embodiments, the first Fc domain comprises Q347R/D399V/F405T/S354C mutations, and the second Fc domain comprises K360E/K409WY349C mutations. Each of the foregoing mutations is according to EU numbering.

[00237] In some embodiments, the first and second Fc domains comprise strand-exchange engineered domains (SEED). *See, e.g.*, Davis JH, *et al.*, *Protein Eng Des Sel* (2010) 23(4):195–202, incorporated herein by reference. SEED CH3 heterodimers are composed of alternating segments of human IgA and IgG CH3 sequences. In some embodiments, the first

Fc domain comprises an AG SEED domain and the second Fc domain comprises a GA SEED domain. In some embodiments, the first Fc domain comprises a GA SEED domain and the second Fc domain comprises an AG SEED domain.

[00238] In some embodiments, the first and second Fc domains comprise A107 mutations or related mutations. *See, e.g.*, Choi HJ, *et al. PLoS One* (2015) 10(12):e0145349, incorporated herein by reference. In some embodiments, the first Fc domain comprises K370E/K409W mutations, and the second Fc domain comprises E357N/D399V/F405T mutations. In some embodiments, the first Fc domain comprises E357N/D399V/F405T mutations, and the second Fc domain comprises K370E/K409W mutations. In some embodiments, the first Fc domain comprises K370E/K409W mutations, and the second Fc domain comprises E357I/S364T/D399V/F405T mutations. In some embodiments, the first Fc domain comprises E357I/S364T/D399V/F405T mutations, and the second Fc domain comprises K370E/K409W mutations. In some embodiments, the first Fc domain comprises K370M/K409W mutations, and the second Fc domain comprises E357M/S364W/D399V/F405T mutations. In some embodiments, the first Fc domain comprises E357M/S364W/D399V/F405T mutations, and the second Fc domain comprises K370M/K409W mutations. In some embodiments, the first Fc domain comprises K370D/K409W mutations, and the second Fc domain comprises E357M/D399V/F405T mutations. In some embodiments, the first Fc domain comprises E357M/D399V/F405T mutations, and the second Fc domain comprises K370D/K409W mutations. In some embodiments, the first Fc domain comprises E357D/S364W/K370E mutations, and the second Fc domain comprises E357N/K370R mutations. In some embodiments, the first Fc domain comprises E357N/K370R mutations, and the second Fc domain comprises E357D/S364W/K370E mutations. In some embodiments, the first Fc domain comprises E357A/S364Y/K370E mutations, and the second Fc domain comprises E357N/K370H mutations. In some embodiments, the first Fc domain comprises E357N/K370H mutations, and the second Fc domain comprises E357A/S364Y/K370E mutations. In some embodiments, the first Fc domain comprises E357G/S364W/K370E mutations, and the second Fc domain comprises an E357N mutation. In some embodiments, the first Fc domain comprises an E357N mutation, and the second Fc domain comprises E357G/S364W/DK70E mutations. In some embodiments, the first Fc domain comprises E357N/S364W/K370E mutations, and the second Fc domain comprises an E357N mutation. In some embodiments, the first Fc domain comprises an E357N mutation, and the second Fc domain comprises E357N/S364W/DK70E mutations. Each of the foregoing mutations is according to EU numbering.

[00239] In some embodiments, the first and second Fc domains comprise Duobody® mutations. *See, e.g.*, Labrijn et al., *Nat Biotech* 27(8), 767-71 (2009); Labrijn et al., *J Immunol* 187(6), 3238-46 (2011); Labrijn et al., *PNAS* 110(13): 5145-5150 (2013); Labrijn et al., *Nature Protocols* 9(10): 2450-63 (2014); Labrijn et al., *Sci Report* 7(1) (2017); Engelberts et al. *EBioMedicine*. (2020) 52:102625 and Middleburg et al *Cancers* (Basel). (2021) 14;13(2):287), each of which is incorporated herein by reference in its entirety. Such mutations allow two separately generated antibodies to be recombined into a bispecific antibody by controlled Fab-arm exchange. Non-limiting examples of Duobody® mutations include an F405L mutation and a K409R mutation. In some embodiments, the first Fc domain comprises an F405L mutation. In some embodiments, the first Fc domain comprises a K409R mutation. In some embodiments, the second Fc domain comprises an F405L mutation. In some embodiments, the second Fc domain comprises a K409R mutation. In some embodiments, the first Fc domain comprises an F405L mutation, and the second Fc domain comprises a K409R mutation. In some embodiments, the first Fc domain comprises a K409R mutation, and the second Fc domain comprises an F405L mutation.

[00240] In some embodiments, anti-CD3 bispecific antibody comprises CrossMAb® mutations. *See, e.g.* Surowka et al. MAbs. 202113(1):1967714. CrossMAb® technology addresses the issues of light chain mispairing by swapping the CH1 and CL domains of one of the arms of the bispecific antibody. For example, the heavy chain of one arm of a bispecific antibody can contain, from N-term to C-term, a VH domain, a CL domain, a hinge, a CH2 domain and a CH3 domain, and the light chain of that arm of the bispecific antibody can contain, from N-term to C-term, a VL domain and a CH1 domain. A similar effect can be achieved by swapping the VH and VL domains of one of the arms of the bispecific antibody. For example, the heavy chain of one arm of a bispecific antibody can contain, from N-term to C-term, a VL domain, a CH1 domain, a hinge, a CH2 domain and a CH3 domain, and the light chain of that arm of the bispecific antibody can contain, from N-term to C-term, a VH domain and a CL domain. Additionally, the VH and CH1 of one arm of a bispecific antibody can be swapped with the VL and CL of that arm. For example, the heavy chain of one arm of a bispecific antibody can contain, from N-term to C-term, a VL domain, a CL domain, a hinge, a CH2 domain and a CH3 domain, and the light chain of that arm of the bispecific antibody can contain, from N-term to C-term, a VH domain and a CH1 domain.

[00241] In some embodiments, the CH1 and CL domains of the anti-CD3 antibody are swapped. In some embodiments, the VH and VL domains of the anti-CD3 antibody are swapped. In some embodiments, the VH/CH1 domains of the anti-CD3 antibody have been

swapped with the VL/CL domains of the anti-CD3 antibody. In some embodiments, the CH1 and CL domains of the anti-tumor antibody are swapped. In some embodiments, the VH and VL domains of the anti-tumor antibody are swapped. In some embodiments, the VH/CH1 domains of the anti-tumor antibody have been swapped with the VL/CL domains of the anti-tumor antibody.

[00242] Without being bound by theory, Fc domains with increased binding to the neonatal Fc Receptor (FcRn) at a pH of about 6.0 are believed to have increased circulating half-lives in vivo because they remain bound to the FcRn in the endosomal compartment. When the endosome recycles to the cell surface and opens to the extracellular space, the Fc-containing protein can be released back into the blood, however, increased binding to FcRn at a higher pH (around 7.4) can prevent the release of the Fc-containing protein back into the blood. Accordingly, Fc mutations that increase binding to FcRn at lower pHs, while permitting release from the FcRn at higher pHs should increase their circulating half-lives. *See, e.g.*, Dall' Acqua *et al. J. Immunol.*, 2002, 169:5171-5180. The charge state of histidine changes between pH 6.9 and pH 7.4, and histidine residues in the Fc domain (H310 and H435) where shown to play an important role in the pH-dependent binding to FcRn. *Id.*; see, also, Oganesyan V et al. *J Biol Chem*. 2014 ;289(11):7812-24). Residues shown to be important in improved FcRn binding include improved P230, F241, V264, T307, N315, A330, A378, N389, M428, and N434 (according to EU numbering). *See, e.g.*, Céline, M. *et al.*, "Selection of IgG Variants with Increased FcRn Binding Using Random and Directed Mutagenesis: Impact on Effector Functions," *Front. Immunol.* 2015, vol. 6, doi: 10.3389/fimmu.2015.00039. Exemplary improved FcRn-binding mutations of these residues include, but are not limited to, P230S, V264E, T307A, N315D, A330V, A378V, N389T, M428L, and N434Y. Non-limiting examples of additional improved FcRn-binding mutations known in the art include, 436I, 436V, 311I, 311V, 428L, 434S, 428L/434S, 259I, 308F, 259I/308F, 259I/308F/428L, 307Q/434S, 434A, 434H, 250Q/428L, M252Y/S254T/T256E, 307Q/434A, 307Q/380A/434A, and 308P/434A (according to EU numbering). *See, e.g.*, U.S. 8,637,641, which is incorporated herein by reference in its entirety. In some embodiments, the first Fc domain and/or the second Fc domain are independently engineered to further prolong systemic exposure and increase half-life through enhanced FcRn binding at a lower pH (6.0).

[00243] In some embodiments, the first and/or second Fc domain are independently engineered to have improved PK. In some embodiments, the first and/or second Fc domains of the present disclosure independently comprise amino acid substitutions M428L and/or

N434S, according to EU numbering. In some embodiments, the first Fc domain comprises the amino acid substitution M428L or N434S. In some embodiments, the first Fc domain comprises amino acid substitutions M428L and N434S. In some embodiments, the first Fc domain comprises the amino acid substitution M428L. In some embodiments, the first Fc domain comprises the amino acid substitution N434S. In some embodiments, the second Fc domain comprises the amino acid substitution M428L or N434S. In some embodiments, the second Fc domain comprises amino acid substitutions M428L and N434S. In some embodiments, the second Fc domain comprises the amino acid substitution M428L. In some embodiments, the second Fc domain comprises the amino acid substitution N434S.

[00244] In some embodiments, the first and/or second Fc domain are independently engineered to allow purification of homodimers away from heterodimers by increasing the pI difference between the two monomers. Accordingly, in some embodiments, amino acid substitutions are introduced into either or both of the constant regions of the anti-CD3 antibody and the anti-target antibody to alter the isoelectric point of that antibody. Accordingly, the homodimeric anti-CD3 antibody, the homodimeric anti-target antibody, and the heterodimeric bispecific antibody will each have a different isoelectric point, allowing them to be separated from each other by, *e.g.*, isoelectric focusing. The separation of the heterodimers from the two homodimers can be accomplished if the pIs of the two monomeric antibodies differ by as little as 0.1 pH unit, with 0.2, 0.3, 0.4 and 0.5 or greater all finding use in the present invention. There are two general categories of pI variants: those that increase the pI of the antibody (basic changes) and those that decrease the pI of the antibody (acidic changes). All combinations of these variants are contemplated: one antibody may be wild type, or a variant that does not display a significantly different pI from wild-type, and the other can be either more basic or more acidic. Alternatively, each antibody may be changed, one to more basic and one to more acidic. Such mutations may be introduced into the hinge, CH2 and/or CH3 domains of the antibody.

[00245] In some embodiments, the first and/or second Fc domain are independently engineered to allow purification of homodimers away from heterodimers by increasing the pI difference between the two monomers. Accordingly, in some embodiments, amino acid substitutions are introduced into either or both of the constant regions of the anti-CD3 antibody and the anti-tumor antibody to alter the isoelectric point of that antibody. Accordingly, the homodimeric anti-CD3 antibody, the homodimeric anti-tumor antibody, and the heterodimeric bispecific antibody will each have a different isoelectric point, allowing them to be separated from each other by, *e.g.*, isoelectric focusing. The separation of the heterodimers from the two

homodimers can be accomplished if the pIs of the two monomeric antibodies differ by as little as 0.1 pH unit, with 0.2, 0.3, 0.4 and 0.5 or greater all finding use in the present invention. There are two general categories of pI variants: those that increase the pI of the antibody (basic changes) and those that decrease the pI of the antibody (acidic changes). All combinations of these variants are contemplated: one antibody may be wild type, or a variant that does not display a significantly different pI from wild-type, and the other can be either more basic or more acidic. Alternatively, each antibody may be changed, one to more basic and one to more acidic. Such mutations may be introduced into the hinge, CH2 and/or CH3 domains of the antibody.

[00246] In some embodiments, pI mutations are introduced into the hinge domain. Residues 221, 222, 223, 224, 225, 233, 234, 235 and 236 (according to EU numbering) within the hinge may be mutated to alter the pI of an antibody. Non-limiting examples of substitutions that may be used to lower the pI of hinge domains include a deletion at position 221, a non-native valine or threonine at position 222, a deletion at position 223, a non-native glutamic acid at position 224, a deletion at position 225, a deletion at position 235 and a deletion or a non-native alanine at position 236.

[00247] In some embodiments, pI mutations are introduced into the CH2 domain. Residues 274, 296, 300, 309, 320, 322, 326, 327, 334 and 339 (according to EU numbering) within the CH2 may be mutated to alter the pI of an antibody. Non-limiting examples of substitutions that may be used to lower the pI of CH2 domains include a non-native glutamine or glutamic acid at position 274, a non-native phenylalanine at position 296, a non-native phenylalanine at position 300, a non-native valine at position 309, a non-native glutamic acid at position 320, a non-native glutamic acid at position 322, a non-native glutamic acid at position 326, a non-native glycine at position 327, a non-native glutamic acid at position 334, a non-native threonine at position 339.

[00248] In some embodiments, pI mutations are introduced into the CH3 domain. Residues 355, 359, 362, 384, 389, 392, 397, 418, 419, 444 and 447 (according to EU numbering) within the CH3 may be mutated to alter the pI of an antibody. Non-limiting examples of substitutions that may be used to lower the pI of CH3 domains include a non-native glutamine or glutamic acid at position 355, a non-native serine at position 384, a non-native asparagine or glutamic acid at position 392, a non-native methionine at position 397, a non-native glutamic acid at position 419, a non-native glutamic acid at position 359, a non-native glutamic acid at position 362, a non-native glutamic acid at position 389, a non-native

glutamic acid at position 418, a non-native glutamic acid at position 444, and a deletion or non-native aspartic acid at position 447.

[00249] Mutations that delete a positively charged residue or substitute it with a neutral or negatively charged residue will lower the pI of an antibody. Non-limiting examples of positively charged residues that may be deleted or substituted include: K274, R355, K392, and K447 (according to EU numbering). Exemplary pI-lowering mutations of these residues include: K274Q, R355Q, K392N, and K447del (deletion of K447). Mutations that substitute a neutral residue with a negatively charged residue will also lower the pI of an antibody. Non-limiting examples of neutral residues that may be substituted with negatively charged residues include: N203, Q295, N384, Q418, Q419, and N421 (according to EU numbering). Exemplary pI-lowering mutations of these residues include: N203D, Q295E, N384D, Q418E, Q419E, and N421D.

[00250] Mutations that delete a negatively charged residue or substitute it with a neutral or positively charged residue will raise the pI of an antibody. Non-limiting examples of negatively charged residues that may be deleted or substituted include: E269, E272, E283, and E357 (according to EU numbering). Exemplary pI-raising mutations of these residues include: E269Q, E272Q, E283Q, and E357Q. Mutations that substitute a neutral residue with a positively charged residue will also raise the pI of an antibody. Non-limiting examples of neutral residues that may be substituted with positively charged residues include: Q196, P217, P228, and N276 (according to EU numbering). Exemplary pI-raising mutations of these residues include: Q196K, P217R, P228R, and N276K.

[00251] In some embodiments, the first Fc domain comprises one or more mutations to lower the isoelectric point as compared to a wild-type Fc domain. In some embodiments, the first Fc domain comprises one or more mutations to raise the isoelectric point as compared to a wild-type Fc domain. In some embodiments, the second Fc domain comprises one or more mutations to lower the isoelectric point as compared to a wild-type Fc domain. In some embodiments, the second Fc domain comprises one or more mutations to raise the isoelectric point as compared to a wild-type Fc domain. In some embodiments, the first Fc domain comprises one or more mutations to lower the isoelectric point as compared to a wild-type Fc domain and the second Fc domain comprises one or more mutations to raise the isoelectric point as compared to a wild-type Fc domain. In some embodiments, the first Fc domain comprises one or more mutations to raise the isoelectric point as compared to a wild-type Fc domain and the second Fc domain comprises one or more mutations to lower the isoelectric point as compared to a wild-type Fc domain.

[00252] In some embodiments, the anti-tumor antibody is an anti-CD33 antibody. In some embodiments, the anti-CD33 antibody comprises the six CDRs of gemtuzumab. In some embodiments, the anti-CD33 antibody comprises the VH of gemtuzumab. In some embodiments, the anti-CD33 antibody comprises the VL of gemtuzumab. In some embodiments, the anti-CD33 antibody comprises the VH and the VL of gemtuzumab. In some embodiments, the heavy chain of the anti-CD33 antibody comprises the amino acid sequence of SEQ ID NO: 1150. In some embodiments, the light chain of the anti-CD33 antibody comprises the amino acid sequence of SEQ ID NO: 1151. In some embodiments, the heavy chain of the anti-CD33 antibody comprises the amino acid sequence of SEQ ID NO: 1150, and the light chain of the anti-CD33 antibody comprises the amino acid sequence of SEQ ID NO: 1151.

Polynucleotides

[00253] One aspect of the present disclosure provides a polynucleotide sequence that encodes an anti-CD3 antibody, or antigen-binding fragment thereof, disclosed herein. In some embodiments, the anti-CD3 antibody is an anti-CD3 bispecific antibody. In some embodiments, the polynucleotide is a recombinant polynucleotide. In some embodiments, the polynucleotide is cDNA. In some embodiments, separate polynucleotide molecules encode a heavy chain and a light chain of an anti-CD3 antibody or fragment. In some embodiments, a first polynucleotide encodes the heavy chain of an anti-CD3 antibody or fragment, and a second polynucleotide encodes the light chain of the anti-CD3 antibody or fragment. In other embodiments, the same polynucleotide molecule encodes both a heavy chain and a light chain of an anti-CD3 antibody or fragment.

[00254] In some embodiments, the polynucleotide encodes a CDR of an anti-CD3 antibody disclosed herein. In some embodiments, the polynucleotide comprises a sequence encoding a HCDR1 polynucleotide sequence disclosed herein. In some embodiments, the polynucleotide comprises a sequence encoding a HCDR2 polynucleotide sequence disclosed herein. In some embodiments, the polynucleotide comprises a sequence encoding a HCDR3 polynucleotide sequence disclosed herein. In some embodiments, the polynucleotide comprises a sequence encoding a LCDR1 polynucleotide sequence disclosed herein. In some embodiments, the polynucleotide comprises a sequence encoding a LCDR2 polynucleotide sequence disclosed herein. In some embodiments, the polynucleotide comprises a sequence encoding a LCDR3 polynucleotide sequence disclosed herein. In some embodiments, the polynucleotide comprises a sequence encoding the six CDRs of an anti-CD3 antibody disclosed

herein. In some embodiments, the polynucleotide comprises a sequence encoding the LCDR1, LCDR2, LCDR3, HCDR1, HCDR2, and HCDR3 of an anti-CD3 antibody disclosed herein.

[00255] In some embodiments, a polynucleotide comprises a sequence encoding a VH of an anti-CD3 antibody disclosed herein. In some embodiments, a polynucleotide comprises a sequence encoding a VL of an anti-CD3 antibody disclosed herein. In some embodiments, a polynucleotide comprises a sequence encoding a VH of an anti-CD3 antibody disclosed herein and a sequence encoding a VL of an anti-CD3 antibody disclosed herein.

[00256] In some embodiments, the polynucleotide encodes a VL comprising an amino acid sequence that is at least 70%, 75%, 80%, 85%, 90%, 95%, 97%, 98% or 99% identical to the VL amino acid sequence of any one of SEQ ID NOs: 688-914. Optionally, the polynucleotide encodes a VL comprising an amino acid sequence that is at least 70%, 75%, 80%, 85%, 90%, 95%, 97%, 98% or 99% similar to the VL amino acid sequence of SEQ ID NO: 688-914. Polynucleotides may include nucleotide sequences that hybridize under highly stringent conditions to the complement of a polynucleotide encoding the amino acid sequence the VL region of SEQ ID NO: 688-914.

[00257] In some embodiments, the polynucleotide encodes a VH comprising an amino acid sequence that is at least 70%, 75%, 80%, 85%, 90%, 95%, 97%, 98% or 99% identical to the VH amino acid sequence of any one of SEQ ID NOs: 915-1141. Optionally, the polynucleotide encodes a VH comprising an amino acid sequence that is at least 70%, 75%, 80%, 85%, 90%, 95%, 97%, 98% or 99% similar to the VH amino acid sequence of SEQ ID NO: 915-1141. Polynucleotides may include nucleotide sequences that hybridize under highly stringent conditions to the complement of a polynucleotide encoding the amino acid sequence the VH region of SEQ ID NO: 915-1141.

[00258] It is known in the art that each heavy chain and light chain (or fragment thereof) is expressed comprising a leader sequence (also known as a signal sequence) at its N terminus, which is used to transport the newly synthesized chains into the endoplasmic reticulum. During post-translational processing the leader sequences is remove and, therefore, is not present in the final chain or the mature antibody. Most heavy chain leader sequences contain 19 amino acid residues (i.e., are encoded by the first 57 nucleotides), and most light chain leader sequences contain 22 amino acid residues (i.e. are encoded by the first 66 nucleotides). Haryadi R, *et al.*, *PLoS One*, 2015, vol. 10(2): e0116878. The skilled artisan would recognize that the nucleotide sequence encoding the mature heavy chain or light chain (or fragment thereof) may be operably linked to a particular leader sequence to optimize its expression in a given expression system. *Id.*

Vectors

[00259] An additional aspect of the disclosure provides one or more vectors comprising a polynucleotide sequence encoding an anti-CD3 antibody, or an antigen-binding fragment thereof, disclosed herein. In some embodiments, the anti-CD3 antibody is an anti-CD3 bispecific antibody. In some embodiments, the sequences encoding the heavy and light chains of the anti-CD3 antibody or fragment are on the same vector. In some embodiments, the sequences encoding the heavy and lights chain of the anti-CD3 antibody or fragment are on separate vectors. In some embodiments, the sequence encoding the heavy chain of the anti-CD3 antibody or fragment is on a first vector and the sequence encoding the light chain of the anti-CD3 antibody or fragment is on a second vector. In some embodiments, the vector comprising a polynucleotide sequence encoding a HCDR1, a HCDR2, and an HCDR3 of an anti-CD3 antibody, or an antigen-binding fragment thereof, disclosed herein. The vector may comprise a polynucleotide sequence encoding a LCDR1, a LCDR2, and an LCDR3 of an anti-CD3 antibody, or an antigen-binding fragment thereof, disclosed herein. In some embodiments, the vector comprising a polynucleotide sequence encoding a HCDR1, a HCDR2, an HCDR3, a LCDR1, a LCDR2, and an LCDR3 of an anti-CD3 antibody, or an antigen-binding fragment thereof, disclosed herein. In some embodiments, the vector comprising a polynucleotide sequence encoding a VH of an anti-CD3 antibody, or an antigen-binding fragment thereof, disclosed herein. The vector may comprise a polynucleotide sequence encoding a VL of an anti-CD3 antibody, or an antigen-binding fragment thereof, disclosed herein. In some embodiments, the vector comprising a polynucleotide sequence encoding a VL and a VH of an anti-CD3 antibody, or an antigen-binding fragment thereof, disclosed herein. In some embodiments, the vector comprising a polynucleotide sequence encoding a heavy chain of an anti-CD3 antibody, or an antigen-binding fragment thereof, disclosed herein. The vector may comprise a polynucleotide sequence encoding a light chain of an anti-CD3 antibody, or an antigen-binding fragment thereof, disclosed herein. In some embodiments, the vector comprising a polynucleotide sequence encoding a light chain and a heavy chain of an anti-CD3 antibody, or an antigen-binding fragment thereof, disclosed herein. In some embodiments, the vector is an expression vector. In some embodiments, the vector is a cloning vector.

[00260] Suitable cloning and expression vectors can include a variety of components, such as promoter, enhancer, and other transcriptional regulatory sequences. The vector may also be constructed to allow for subsequent cloning of an antibody variable domain into different vectors.

[00261] Suitable cloning vectors may be constructed according to standard techniques, or may be selected from a large number of cloning vectors available in the art. While the cloning vector selected may vary according to the host cell intended to be used, useful cloning vectors will generally have the ability to self-replicate, may possess a single target for a particular restriction endonuclease, and/or may carry genes for a marker that can be used in selecting clones containing the vector. Suitable examples include plasmids and bacterial viruses, e.g., pUC18, pUC19, Bluescript (*e.g.*, pBS SK+) and its derivatives, mp18, mp19, pBR322, pMB9, ColE1, pCR1, RP4, pCDNA, TGEX phage DNAs, and shuttle vectors such as pSA3 and pAT28. These and many other cloning vectors are available from commercial vendors such as Thermo, BioRad, Agilent, and Antibody Design Labs.

[00262] Expression vectors generally are replicable polynucleotide constructs that contain a polynucleotide according to the disclosure. It is implied that an expression vector must be replicable in the host cells either as episomes or as an integral part of the chromosomal DNA. Suitable expression vectors include but are not limited to plasmids, viral vectors, including adenoviruses, adeno-associated viruses, retroviruses, cosmids, and expression vector(s) disclosed in PCT Publication No. WO 87/04462. Vector components may generally include, but are not limited to, one or more of the following: a signal sequence; an origin of replication; one or more marker genes; suitable transcriptional controlling elements (such as promoters, enhancers and terminator). For expression (*i.e.*, translation), one or more translational controlling elements are also usually required, such as ribosome binding sites, translation initiation sites, stop codons, and polyadenylation signals.

[00263] The vectors containing the polynucleotides of the disclosure and/or the polynucleotides themselves, can be introduced into the host cell by any of a number of appropriate means, including electroporation, transfection employing calcium chloride, rubidium chloride, calcium phosphate, DEAE-dextran, or other substances; microprojectile bombardment; lipofection; and infection (e.g., where the vector is an infectious agent such as vaccinia virus). The choice of introducing vectors or polynucleotides will often depend on features of the host cell.

[00264] The antibody, or antigen-binding fragment thereof, may be made recombinantly using a suitable host cell. A nucleic acid encoding the antibody or antigen-binding fragment thereof can be cloned into an expression vector, which can then be introduced into a host cell to obtain the synthesis of an antibody in the recombinant host cell.

Host Cells

[00265] An additional aspect of the disclosure provides a host cell for expressing an anti-CD3 antibody or an antigen-binding fragment thereof of the disclosure. In some embodiments, the anti-CD3 antibody is an anti-CD3 bispecific antibody. In some embodiments, the host cell comprises a polynucleotide encoding the heavy and light chains of an anti-CD3 antibody or fragment disclosed herein. In some embodiments, the host cell comprises a pair of polynucleotides: one encoding the light chain and the other encoding the heavy chain of an anti-CD3 antibody disclosed herein. In some embodiments, the host cell comprises a vector encoding the heavy and light chains of an anti-CD3 antibody or fragment disclosed herein. In some embodiments, the host cell comprises a pair of vectors: one encoding the light chain and the other encoding the heavy chain of an anti-CD3 antibody or fragment disclosed herein. In some embodiments, the host cell is an isolated host cell.

[00266] In some embodiments, the host cell is an *E. coli* cell, a yeast cell, an insect cell, a simian COS cell, a Chinese hamster ovary (CHO) cell, a myeloma cell, or a hybridoma cell. In some embodiments, the host cell is a mammalian cell. Mammalian cell lines available as hosts for expression are well known in the art and include many immortalized cell lines available from the American Type Culture Collection (ATCC). These include, *inter alia*, Chinese hamster ovary (CHO) cells, NSO, SP2 cells, HeLa cells, baby hamster kidney (BHK) cells, monkey kidney cells (COS), human hepatocellular carcinoma cells (e.g., Hep G2), A549 cells, and a number of other cell lines. Cell lines of particular preference are selected through determining which cell lines have high expression levels. In some embodiments, the host cell is a CHO cell, a Human embryonic kidney (HEK) 293 cell, or an Sp2.0 cell. In some embodiments, the host cell is a CHO cell. In some embodiments, the host cell is a HEK293 cell. In some embodiments, the host cell is an Sp2.0 cell. In some embodiments, the host cell is a hybridoma cell. Other cell lines that may be used are insect cell lines, such as Sf9 cells. In some embodiments, the host cell does not otherwise produce an immunoglobulin protein.

Methods of Producing Anti-CD3 Antibodies

[00267] An additional aspect of the disclosure provides a method for producing an anti-CD3 antibody or an antigen-binding fragment thereof of the disclosure. In some embodiments, the anti-CD3 antibody is an anti-CD3 bispecific antibody. The antibody, or antigen-binding fragment thereof, may be made recombinantly using a suitable host cell. A nucleic acid encoding the antibody or antigen-binding fragment thereof can be cloned into an expression vector, which can then be introduced into a host cell to obtain the synthesis of an antibody in the recombinant host cell.

[00268] When recombinant expression vectors encoding antibody genes are introduced into mammalian host cells, the antibodies are produced by culturing the host cells for a period of time sufficient to allow for expression of the antibody in the host cells or, more preferably, secretion of the antibody into the culture medium in which the host cells are grown. Antibodies can be recovered from the culture medium using standard protein purification methods. In some embodiments, the method comprises culturing a host cell disclosed herein under conditions in which the antibody or fragment is expressed by the cell. In some embodiments, the method further comprises recovering the antibody or fragment from the culture media.

Modified Anti-CD3 Antibodies

[00269] Anti-CD3 antibodies of the present disclosure, and antigen-binding fragments and variants thereof, may also be conjugated or operably linked to another compound (*e.g.*, therapeutic agent, label, or tag), referred to herein as a conjugate. In some embodiments, the anti-CD3 antibody is an anti-CD3 bispecific antibody. The conjugate may be a cytotoxic agent, a chemotherapeutic agent, a cytokine, an anti-angiogenic agent, a tyrosine kinase inhibitor, a toxin, a radioisotope, or other therapeutically active agent. Chemotherapeutic agents, cytokines, anti-angiogenic agents, tyrosine kinase inhibitors, and other therapeutic agents are contemplated. In some embodiments, the antibody is conjugated or operably linked to a toxin, including but not limited to small molecule toxins and enzymatically active toxins of bacterial, fungal, plant, animal or synthetic origin, including fragments and/or variants thereof.

[00270] There are many linking groups known in the art for making antibody conjugates, including, for example, those disclosed in U.S. Pat. No. 5,208,020 or EP Patent 0425235 B1, and Chari et al., Cancer Research 52: 127-131 (1992). The linking groups include disulfide groups, thioether groups, acid labile groups, photolabile groups, peptidase labile groups, or esterase labile groups, as disclosed in the above-identified patents, disulfide and thioether groups being preferred.

Pharmaceutical Compositions

[00271] An additional aspect of the present disclosure provides pharmaceutical compositions and methods of use. The pharmaceutical compositions of the present disclosure include an anti-CD3 antibody, or fragment thereof, disclosed herein in a pharmaceutically acceptable carrier. In some embodiments, the anti-CD3 antibody is an anti-CD3 bispecific antibody. Pharmaceutical compositions may be administered *in vivo* for the treatment or prevention of a disease or disorder. Furthermore, pharmaceutical compositions comprising an antibody, or a fragment thereof, of the present disclosure may include one or more agents for use in combination or may be administered in conjunction with one or more agents. Agents

for use in combination with an anti-CD3 antibody disclosed herein include, but are not limited to cytotoxic agents, chemotherapeutic agents, cytokines, anti-angiogenic agents, tyrosine kinase inhibitors, toxins, and radioisotopes.

[00272] The pharmaceutical compositions disclosed herein may include a therapeutically effective amount or a prophylactically effective amount of an antibody disclosed herein. A therapeutically effective amount of the antibody may vary according to factors such as the disease state, age, sex, and weight of the individual, and the ability of the antibody or antibody portion to elicit a desired response in the individual. A therapeutically effective amount is also one in which any toxic or detrimental effects of the antibody are outweighed by the therapeutically beneficial effects. It is routine in the art for the skilled artisan to determine a therapeutically effective amount of an antibody disclosed herein based on these factors.

[00273] The present disclosure also provides kits relating to any of the antibodies, or fragments thereof, and/or methods disclosed herein. In some embodiments, the anti-CD3 antibody is an anti-CD3 bispecific antibody. Kits of the present disclosure may include diagnostic or therapeutic agents. A kit of the present disclosure may further provide instructions for use of a composition or antibody and packaging. A kit of the present disclosure may include devices, reagents, containers or other components. Furthermore, a kit of the present disclosure may also require the use of an apparatus, instrument or device, including a computer.

Methods of Use

[00274] The AlivaMab® antibodies against CD3, and in particular fully human antibodies and bispecific antibodies incorporating all or portions of the heavy chain and light chain variable regions from the AlivaMab® antibodies, may have utility for the treatment of human disease including, but not limited to, cancer and autoimmunity.

[00275] An anti-CD3 antibody, or antigen-binding fragment thereof, disclosed herein may be used in research, diagnostic, and/or therapeutic methods. In some embodiments, an anti-CD3 antibody, or antigen-binding fragment thereof, disclosed herein is used to treat cancer. In some embodiments, the method comprising administering a therapeutically effective amount of an antibody, or antigen-binding fragment thereof, disclosed herein. In some embodiments, the method comprising administering a therapeutically effective amount of a bispecific antibody, or antigen-binding fragment thereof, disclosed herein. In some

embodiments, the anti-CD3 antibody is an anti-CD3 bispecific antibody comprising an anti-tumor antibody.

[00276] In some embodiments, an anti-CD3 antibody, or antigen-binding fragment thereof, disclosed herein is used to treat an autoimmune disease. In some embodiments, the autoimmune disease is graft-versus-host disease or type I diabetes as well as T-cell mediated autoimmune disorders. In some embodiments, the method comprising administering a therapeutically effective amount of an antibody, or antigen-binding fragment thereof, disclosed herein.

[00277] A further aspect of the disclosure provides methods of treating or preventing cancer in a subject in need thereof by administering an anti-CD3 antibody, or antigen-binding fragment thereof, of the disclosure or a composition comprising the antibody or fragment to a subject in need thereof. An additional aspect of the disclosure provides an anti-CD3 antibody, or an antigen-binding fragment thereof, of the disclosure for use in the treatment of cancer. Another aspect of the disclosure provides use of an anti-CD3 antibody, or an antigen-binding fragment thereof, of the disclosure in the manufacture of a medicament for treating cancer. In some embodiments, the anti-CD3 antibody is an anti-CD3 bispecific antibody. In some embodiments, the anti-CD3 antibody is an anti-CD3 multi-specific antibody.

[00278] Another aspect of the disclosure provides methods of treating or preventing autoimmune diseases or disorders in a subject in need thereof by administering an anti-CD3 antibody, or antigen-binding fragment thereof, of the disclosure or a composition comprising the antibody or fragment to a subject in need thereof. An additional aspect of the disclosure provides an anti-CD3 antibody, or an antigen-binding fragment thereof, of the disclosure for use in the treatment of autoimmune diseases or disorders. Another aspect of the disclosure provides use of an anti-CD3 antibody, or an antigen-binding fragment thereof, of the disclosure in the manufacture of a medicament for treating autoimmune diseases or disorders. In some embodiments, the anti-CD3 antibody is an anti-CD3 bispecific antibody. In some embodiments, the anti-CD3 antibody is an anti-CD3 multi-specific antibody.

[00279] One aspect of the disclosure provides a method of maintaining cancer remission in a subject by administering an anti-CD3 antibody, or antigen-binding fragment thereof, of the disclosure or a composition comprising the antibody or fragment to a subject in need thereof. An additional aspect of the disclosure provides an anti-CD3 antibody, or an antigen-binding fragment thereof, of the disclosure for use in maintaining cancer remission. Another aspect of the disclosure provides use of an anti-CD3 antibody, or an antigen-binding fragment thereof, of the disclosure in the manufacture of a medicament for maintaining cancer remission.

In some embodiments, the anti-CD3 antibody is an anti-CD3 bispecific antibody. In some embodiments, the anti-CD3 antibody is an anti-CD3 multi-specific antibody.

[00280] An additional aspect of the disclosure provides a method of redirecting a T-cell to a tumor cell, wherein the method comprises contacting the T-cell with an anti-CD3 bispecific antibody, or a bispecific antigen-binding fragment thereof, of the disclosure or a composition comprising the bispecific antibody or fragment. A further aspect of the disclosure provides an anti-CD3 bispecific antibody, or a bispecific antigen-binding fragment thereof, for use in targeting a T-cell to a tumor cell. One aspect of the disclosure provides the use of an anti-CD3 bispecific antibody, or a bispecific antigen-binding fragment thereof, in the manufacture of a medicament for targeting a T-cell to a tumor cell. In some embodiments, bispecific antibody or fragment further comprises a tumor-targeting arm.

[00281] A further aspect of the invention provides a method of treating cancer by administering an anti-CD3 bispecific antibody, or a bispecific antigen-binding fragment thereof, of the disclosure or a composition comprising administering the bispecific antibody or fragment to a subject in need thereof, wherein the bispecific antibody or fragment further comprises a tumor-targeting arm with an anti-tumor antibody. An additional aspect of the disclosure provides an anti-CD3 bispecific antibody, or a bispecific antigen-binding fragment thereof, of the disclosure or a composition comprising the bispecific antibody or fragment for use in treating cancer, wherein the bispecific antibody or fragment further comprises a tumor-targeting arm. One aspect of the disclosure provides use of an anti-CD3 bispecific antibody, or a bispecific antigen-binding fragment thereof, of the disclosure in the manufacture of a medicament for treating cancer.

EXEMPLARY EMBODIMENTS

[00282] Particular embodiments of the disclosure are set forth in the following numbered paragraphs:

1. An isolated anti-CD3 antibody, or an antigen-binding fragment thereof, comprising:

   i) a heavy chain variable region comprising a VHCDR1 selected from any of SEQ ID NOs: 345-457, a VHCDR2 selected from any of SEQ ID NOs: 458-573, and a VHCDR3 selected from any of SEQ ID NOs: 574-687 and

   ii) a light chain variable region comprising a VLCDR1 selected from any of SEQ ID NOs :1-113, a VLCDR2 selected from any of SEQ ID NOs: 114-226, and a VLCDR3 selected from any of SEQ ID NOs :227-377.

2. The antibody, or antigen-binding fragment thereof, of paragraph 1, wherein the VH is selected from any one of SEQ ID NOs: 915-1141.

3. The antibody, or antigen-binding fragment thereof, of paragraph 1 or paragraph 2, wherein the VL is selected from any one of SEQ ID NOs: 688-914.

4. The antibody, or antigen-binding fragment thereof, of any one of paragraphs 1-3, wherein the antibody is human.

5. The antibody, or antigen-binding fragment thereof, of any one of paragraphs 1-3, wherein the antibody is chimeric.

6. The antibody, or antigen-binding fragment thereof, of any one of paragraphs 1-5, wherein the antibody is selected from a single-variable domain antibody, single chain antibody, a scFv, a bispecific antibody, a multi-specific antibody, a Fab, a F(ab')2, and a whole antibody.

7. The antibody, or antigen-binding fragment thereof, of paragraph 6, wherein the antibody is a multi-specific antibody.

8. The antibody, or antigen-binding fragment thereof, of paragraph 6, wherein the antibody is a bispecific antibody comprising first and second Fc domains.

9. The antibody, or antigen-binding fragment thereof, of paragraph 8, wherein the bispecific antibody further comprises a targeting antibody.

10. The antibody, or antigen-binding fragment thereof, of paragraph 9, wherein the targeting antibody is an anti-tumor antibody, or an antigen-binding fragment thereof.

11. The antibody, or antigen-binding fragment thereof, of any one of paragraphs paragraph 6-10, wherein the anti-CD3 antibody, or the antigen-binding fragment thereof, comprises an scFv.

12. The antibody, or antigen-binding fragment thereof, of paragraph 6 or paragraph 11, wherein the anti-CD3 scFv antibody comprises an amino acid sequence selected from any one of SEQ ID NOs: 1155-1236.

13. The antibody, or antigen-binding fragment thereof, of paragraph 11 or 12, wherein the anti-CD3 scFv antibody is operably linked to the first Fc domain.

14. The antibody, or antigen-binding fragment thereof, of paragraph 13, wherein the anti-CD3 scFv antibody is operably linked to the first Fc domain through a first linker.

15. The antibody, or antigen-binding fragment thereof, of any one of paragraphs 9-14, wherein the targeting antibody, or the antigen-binding fragment thereof, comprises a Fab fragment or a F(ab')2 fragment.

16. The antibody, or antigen-binding fragment thereof, of paragraph 15, wherein the targeting Fab or F(ab')2 fragment is operably linked to the second Fc domain.

17. The antibody, or antigen-binding fragment thereof, of paragraph 16, wherein the targeting Fab or F(ab')2 fragment is operably linked to the second Fc domain through a second linker.

18. The antibody, or antigen-binding fragment thereof, of paragraph 15 or 17, wherein the first linker or second linker is a variable length Gly-Ser linker.

19. The antibody, or antigen-binding fragment thereof, of paragraph 18, wherein the first linker and second linker are independently selected from SEQ ID NOs.: 1146-1149, and 1237-1238.

20. The antibody, or antigen-binding fragment thereof, of any one of paragraphs 8-19, wherein the first and second Fc domain comprises complementary mutations selected from knobs-into-holes (KIH) mutations, K409R/F405L, HA-TF and related mutations, skew mutations, ZW mutations, 7.8.60 mutations or related mutations, DD-KK mutations or related mutations, EW-RVT mutations or related mutations, strand-exchange engineered domains (SEED), Duobody mutations, CrossMAb mutations, and A107 mutations or related mutations.

21. The antibody, or antigen-binding fragment thereof, of paragraph 20, wherein (1) the first Fc domain comprises a T366W mutation and the second Fc domain comprises T366S/L368A/Y407V mutations; (2) the first Fc domain comprises T366S/L368A/Y407V mutations and the second Fc domain comprises a T366W mutation; (3) the first Fc domain comprises S354C/T366W mutations and the second Fc domain comprises Y349C/T366S/L368A/Y407V mutations; (4) the first Fc domain comprises Y349C/T366S/L368A/Y407V mutations and the second Fc domain comprises S354C/T366W mutation; (5) the first Fc domain comprises S354C/T366W mutations and the second Fc domain comprises Y349C/T366S/L368A/Y407V/H435R/Y436F mutations; (6) the first Fc domain comprises Y349C/T366S/L368A/ Y407V/H435R/Y436F mutations and the second Fc domain comprises S354C/T366W mutations; 7) the first Fc domain comprises S354C/T366W/H435R/Y436F mutations and the second Fc domain comprises Y349C/T366S/L368A/Y407V mutations; or 8) the first Fc domain comprises

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Y349C/T366S/L368A/Y407V mutations and the second Fc domain comprises S354C/T366W/H435R/Y436F mutations.

22. The antibody, or antigen-binding fragment thereof, of paragraph 20, wherein (1) the first and second Fc domains comprise the amino acid sequences of SEQ ID NOs: 1142 and 1143, respectively; or (2) the first and second Fc domains comprise the amino acid sequences of SEQ ID NOs: 1143 and 1142, respectively.

23. The antibody, or antigen-binding fragment thereof, of paragraph 20, wherein (1) the anti-CD3 antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1144, and the anti-tumor antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1145; or (2) the anti-CD3 antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1145, and the anti-tumor antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1144.

24. The antibody, or antigen-binding fragment thereof, of paragraph 20, wherein (1) the first Fc domain comprises a S364H mutation and the second Fc domain comprises a Y349T mutation; (2) the first Fc domain comprises a Y349T mutation and the second Fc domain comprises a S364H mutation; (3) the first Fc domain comprises a F405A mutation and the second Fc domain comprises a T394F mutation; (4) the first Fc domain comprises a T394F mutation and the second Fc domain comprises a F405A mutation; (5) the first Fc domain comprises S364H/T394F mutations and the second Fc domain comprises Y349T/F405A mutations; (6) the first Fc domain comprises Y349T/F405A mutations and the second Fc domain comprises S364H/T394F mutations; (7) the first Fc domain comprises S364H/F405A mutations and the second Fc domain Y349T/T394F mutations; or (8) the first Fc domain comprises Y349T/T394F mutations and the second Fc domain S364H/F405A mutations.

25. The antibody, or antigen-binding fragment thereof, of paragraph 20, wherein (1) the first Fc domain comprises S364K/E357Q mutations and the second Fc domain comprises L368D/K370S mutations; (2) the first Fc domain comprises L368D/K370S mutations and the second Fc domain comprises S364K/E357Q mutations; (3) the first Fc domain comprises L368D/K370S mutations and the second Fc domain comprises a S364K mutation; (4) the first Fc domain comprises a S364K mutation and the second Fc domain comprises L368D/K370S mutations; (5) the first Fc domain comprises L368E/K370S mutations and the second Fc domain comprises a S364K mutation; (6) the first Fc domain comprises a S364K mutation and the second Fc domain comprises L368E/K370S mutations; (7) the first Fc domain comprises

T411E/K360E/Q362E mutations and the second Fc domain comprises a D401K mutation; (8) the first Fc domain comprises a D401K mutation and the second Fc domain comprises T411E/K360E/Q362E mutations; (9) the first Fc domain comprises L368D/K370S mutations and the second Fc domain comprises S364K/E357L mutations; (10) the first Fc domain comprises S364K/E357L mutations and the second Fc domain comprises L368D/K370S mutations; (11) the first Fc domain comprises a K370S mutation and the second Fc domain comprises S364K/E357Q mutations; (12) the first Fc domain comprises S364K/E357Q mutations and the second Fc domain comprises a K370S mutation; (13) the first Fc domain comprises T366S/L368A/Y407V mutations and the second Fc domain comprises a T366W mutation; (14) the first Fc domain comprises a T366W mutation and the second Fc domain comprises T366S/L368A/Y407V mutations; (15) the first Fc domain comprises T366S/L368A/Y407V/Y349C mutations and the second Fc domain comprises T366W/S354C mutations; or (16) the first Fc domain comprises T366W/S354C mutations and the second Fc domain comprises T366S/L368A/Y407V/Y349C mutations.

26. The antibody, or antigen-binding fragment thereof, of paragraph 20, wherein (1) the first Fc domain comprises F405A/Y407V mutations and the second Fc domain comprises a T394W mutation; (2) the first Fc domain comprises a T394W mutation and the second Fc domain comprises F405A/Y407V mutations; (3) the first Fc domain comprises F405A/Y407V mutations and the second Fc domain comprises T366I/T394W mutations; (4) the first Fc domain comprises T366I/T394W mutations and the second Fc domain comprises F405A/Y407V mutations; (5) the first Fc domain comprises F405A/Y407V mutations and the second Fc domain comprises T366L/T394W mutations; (6) the first Fc domain comprises T366L/T394W mutations and the second Fc domain comprises F405A/Y407V mutations; (7) the first Fc domain comprises F405A/Y407V mutations and the second Fc domain comprises T366L/K392M/T394W mutations; (8) the first Fc domain comprises T366L/K392M/T394W mutations and the second Fc domain comprises F405A/Y407V mutations; (9) the first Fc domain comprises L351Y/F405A/Y407V mutations and the second Fc domain comprises T366L/K329M/T394W mutations; (10) the first Fc domain comprises T366L/K329M-/T394W mutations and the second Fc domain comprises L351Y/F405A/Y407V mutations; (11) the first Fc domain comprises T350V/L351Y/F405A/Y407V mutations and the second Fc domain comprises T350V/T366L/K392M/T394W mutations; (12) the first Fc domain comprises T350V/T366L/K392M/T394W mutations and the second Fc domain comprises T350V/L351Y/F405A/Y407V mutations; (13) the first Fc domain comprises

T350V/L351Y/F405A/Y407V mutations and the second Fc domain comprises T350V/T366L-/K392L/T394W mutations; or (14) the first Fc domain comprises T350V/T366L/K392L-/T394W mutations and the second Fc domain comprises T350V/L351Y/F405A/Y407V mutations.

27. The antibody, or antigen-binding fragment thereof, of paragraph 20, wherein (1) the first Fc domain comprises D399M/Y407A mutations and the second Fc domain comprises T366V/K409V mutations; (2) the first Fc domain comprises T366V/K409V mutations and the second Fc domain comprises D399M/Y407A mutations; (3) the first Fc domain comprises K360D/D399M/Y407A mutations and the second Fc domain comprises E345R/Q347R/T366V/K409V mutations; (4) the first Fc domain comprises E345R/Q347R/T366V/K409V mutations and the second Fc domain comprises K360D/D399M/Y407A mutations; (5) the first Fc domain comprises Y349S/K370Y/T366V-/K409V mutations and the second Fc domain comprises E357D/S364Q/Y407A mutations; (6) the first Fc domain comprises E357D/S364Q/Y407A mutations and the second Fc domain comprises Y349S/K370Y/T366V/K409V mutations; (7) the first Fc domain comprises Y349S/K370Y/T366M/K409V mutations, and the second Fc domain comprises E356G/E357D/S364Q/Y407A mutations; (8) the first Fc domain comprises E356G/E357D/S364Q/Y407A mutations, and the second Fc domain comprises Y349S/K370Y/T366M/K409V mutations; (9) the first Fc domain comprises Y349S/K370Y/T366M/K409V mutations and the second Fc domain comprises E357D/S364R/Y407A mutations; or (10) the first Fc domain comprises E357D/S364R/Y407A mutations and the second Fc domain comprises Y349S/K370Y/T366M/K409V mutations.

28. The antibody, or antigen-binding fragment thereof, of paragraph 20, wherein (1) the first Fc domain comprises K409D/K392D mutations and the second Fc domain comprises D399K/E356K mutations; (2) the first Fc domain comprises D399K/E356K mutations and the second Fc domain comprises K409D/K392D mutations; (3) the first Fc domain comprises K409E/K392D mutations and the second Fc domain comprises D399R/E356K mutations; (4) the first Fc domain comprises D399R/E356K mutations and the second Fc domain comprises K409E/K392D mutations; (5) the first Fc domain comprises K409D/K392D mutations and the second Fc domain comprises D399R/E356K mutations; (6) the first Fc domain comprises D399R/E356K mutations and the second Fc domain comprises K409D/K392D mutations; (7) the first Fc domain comprises K409E/K392D mutations and the second Fc domain comprises D399K/E356K mutations; (8) the first Fc domain comprises D399K/E356K mutations and the

second Fc domain comprises K409E/K392D mutations; (9) the first Fc domain comprises K409D/K392D/K370D mutations and the second Fc domain comprises D399K/E356K/-E357K mutations; or (10) the first Fc domain comprises D399K/E356K/E357K mutations and the second Fc domain comprises K409D/K392D/K370D mutations.

29. The antibody, or antigen-binding fragment thereof, of paragraph 20, wherein (1) the first Fc domain comprises a K409W mutation and the second Fc domain comprises F405T/D399V mutations; (2) the first Fc domain comprises F405T/D399V mutations and the second Fc domain comprises a K409W mutation; (3) the first Fc domain comprises K360E/K409W mutations and the second Fc domain comprises Q347R/D399V/F405T mutations; (4) the first Fc domain comprises Q347R/D399V/F405T mutations and the second Fc domain comprises K360E/K409W mutations; (5) the first Fc domain comprises K360E/K409W/Y349C mutations and the second Fc domain comprises Q347R/D399V/F405T/S354C mutations; or (6) the first Fc domain comprises Q347R/D399V/F405T/S354C mutations and the second Fc domain comprises K360E/K409WY349C mutations.

30. The antibody, or antigen-binding fragment thereof, of paragraph 20, wherein (1) the first Fc domain comprises an AG SEED domain and the second Fc domain comprises a GA SEED domain or (2) the first Fc domain comprises a GA SEED domain and the second Fc domain comprises an AG SEED domain.

31. The antibody, or antigen-binding fragment thereof, of paragraph 20, wherein (1) the first Fc domain comprises K370E/K409W mutations and the second Fc domain comprises E357N/D399V/F405T mutations; (2) the first Fc domain comprises E357N/D399V/F405T mutations and the second Fc domain comprises K370E/K409W mutations; (3) the first Fc domain comprises K370E/K409W mutations and the second Fc domain comprises E357I/S364T/D399V/F405T mutations; (4) the first Fc domain comprises E357I/S364T/D399V/F405T mutations and the second Fc domain comprises K370E/K409W mutations; (5) the first Fc domain comprises K370M/K409W mutations and the second Fc domain comprises E357M/S364W/D399V/F405T mutations; (6) the first Fc domain comprises E357M/S364W/D399V/F405T mutations and the second Fc domain comprises K370M/K409W mutations; (7) the first Fc domain comprises K370D/K409W mutations and the second Fc domain comprises E357M/D399V/F405T mutations; (8) the first Fc domain comprises E357M/D399V/F405T mutations and the second Fc domain comprises K370D/K409W mutations; (9) the first Fc domain comprises E357D/S364W/K370E mutations

and the second Fc domain comprises E357N/K370R mutations; (10) the first Fc domain comprises E357N/K370R mutations and the second Fc domain comprises E357D/S364W/K370E mutations; (11) the first Fc domain comprises E357A/S364Y/K370E mutations and the second Fc domain comprises E357N/K370H mutations; (12) the first Fc domain comprises E357N/K370H mutations and the second Fc domain comprises E357A/S364Y/K370E mutations; (13) the first Fc domain comprises E357G/S364W/K370E mutations and the second Fc domain comprises an E357N mutation; (14) the first Fc domain comprises an E357N mutation and the second Fc domain comprises E357G/S364W/DK70E mutations; (15) the first Fc domain comprises E357N/S364W/K370E mutations and the second Fc domain comprises an E357N mutation; or (16) the first Fc domain comprises an E357N mutation and the second Fc domain comprises E357N/S364W/DK70E mutations.

32. The antibody, or antigen-binding fragment thereof, of any one of paragraphs 8-31, wherein the first and/or second Fc domain are independently engineered to have improved pharmacokinetics (PK).

33. The antibody, or antigen-binding fragment thereof, of paragraph 32, wherein the first and/or second Fc domains comprise amino acid substitutions M428L and/or N434S.

34. The antibody, or antigen-binding fragment thereof, of paragraph 10, wherein the anti-tumor antibody is an anti-CD33 antibody.

35. The antibody, or antigen-binding fragment thereof, of paragraph 34, wherein the anti-CD33 antibody comprises the six CDRs of gemtuzumab.

36. The antibody, or antigen-binding fragment thereof, of paragraph 35, wherein the anti-CD33 antibody comprises the VH of gemtuzumab.

37. The antibody, or antigen-binding fragment thereof, of paragraph 35 or 36, wherein the anti-CD33 antibody comprises the VL of gemtuzumab.

38. The antibody, or antigen-binding fragment thereof, of paragraph 34, wherein the anti-CD33 antibody comprises the VH comprising the amino acid sequence of SEQ ID NO: 1151.

39. The antibody, or antigen-binding fragment thereof, of paragraph 34 or 38, wherein the anti-CD33 antibody comprises the VL comprising the amino acid sequence of SEQ ID NO:1152.

40. The antibody, or antigen-binding fragment thereof, of any one of paragraphs 1-39, wherein the antibody is selected from an IgG antibody, an IgM antibody, an IgA antibody, an IgD antibody, and an IgE antibody.

41. The antibody, or antigen-binding fragment thereof, of paragraph 40, wherein the antibody is an IgG antibody.

42. The antibody, or antigen-binding fragment thereof, of paragraph 41, wherein the antibody is a variant of an IgG antibody selected from an IgG1 antibody, an IgG2 antibody, an IgG3 antibody or an IgG4 antibody.

43. The antibody, or antigen-binding fragment thereof, of paragraph 42, wherein the antibody comprises a modified Fc domain derived from an IgG1 molecule.

44. The antibody, or antigen-binding fragment thereof, of paragraph 43, wherein the modified Fc domain derived from the IgG1 molecule comprises an amino acid modification at any one of the positions selected from the group consisting of E216, R217, K218, C219, C220, C226, C229, P230, E233, L234, L235, G236, G237, P238, S239, V240, F241, K246, L251, T260, D265, V266, H268, W277, N297, E318, K322, P329, A330, P331, Q347, N348, T350, L351, K360, T366, N390, K392, T394, D399, S400, F405, Y407, K409, T411 or a combination such amino acid modifications.

45. The antibody, or antigen-binding fragment thereof, of paragraph 43, wherein the modified Fc domain derived from IgG1 comprises an amino acid modification selected from the group consisting of C220S, C226S, C229S, P230S, E233P, L234A, L234F, L234V, L235A, L235E, L235V, G236E, G237A, P238S, D265S, D265A, H268Q, W277T, N297G, N297Q, N297D, N297A, E318A, K322A, P329G, P329A, A330S, P331S, Q347R, Q347E, Q347K, T350V, L351Y, K360D, K360E, T366A, T366I, T366L, T366M, T366V, N390R, N390K, N390D, K392V, K392M, K392R, K392L, K392F, K392E, T394W, D399R, D399W, D399K, S400E, S400D, S400R, S400K, F405A, F405I, F405M, F405T, F405S, F405V, F405W, Y407A, Y407I, Y407L, Y407V, K409F, K409I, K409S, K409W, T411N, T411R, T411Q, T411K, T411D, T411E, T411W, ΔE216-E222, K246R/L251E/T260R, InR234/235, InV235/236, InR236/237, InR237/238, InV238/239, InN238/239, InL238/239, InE238/239, InG238/239, InS239/240, InG240/241, InE240/241, InG240/241, InL238/239/P238Q, InE238/239/N348A, InS239/240/V266A, and InR237/238/G236A or a combination thereof.

46. The antibody, or antigen-binding fragment thereof, of paragraph 45, wherein the modified Fc domain derived from IgG1 comprises L234F/L235E/P331S mutations.

47. The antibody, or antigen-binding fragment thereof, of paragraph 42, wherein the antibody comprises a modified Fc domain derived from an IgG2 molecule.

48. The antibody, or antigen-binding fragment thereof, of paragraph 47, wherein the modified Fc domain derived from the IgG2 molecule comprises an amino acid modification at any one of the positions selected from the group consisting of V234, G237, P238, H268, V309, A330, and P331 or a combination thereof.

49. The antibody, or antigen-binding fragment thereof, of paragraph 48, wherein the modified Fc domain derived from the IgG2 molecule comprises an amino acid modification at any one of the positions selected from the group consisting of V234A, G237A, P238S, H268Q, H268A, V309L, A330S, P331S, or a combination thereof.

50. The antibody, or antigen-binding fragment thereof, of paragraph 42, wherein the antibody comprises a modified Fc domain derived from an IgG4 molecule.

51. The antibody, or antigen-binding fragment thereof, of paragraph 50, wherein the modified Fc domain derived from the IgG4 molecule comprises an amino acid modification at any one of the positions selected from the group consisting of S228, L235, L236, G237, E318, and N297 or a combination thereof.

52. The antibody, or antigen-binding fragment thereof, of paragraph 51, wherein the modified Fc domain derived from the IgG4 molecule comprises an amino acid modification at any one of the positions selected from the group consisting of S228P, L235A, L235E, L236E, G237A, E318A, and N297Q or a combination thereof.

53. A recombinant polynucleotide encoding an anti-CD3 antibody, or antigen-binding fragment thereof, of any one of paragraphs 1-52.

54. An expression vector comprising the recombinant polynucleotide of paragraph 53.

55. A first recombinant polynucleotide encoding the heavy chain of an anti-CD3 antibody, or antigen-binding fragment thereof, of any one of paragraphs 1-52 and a second recombinant polynucleotide encoding the light chain of an anti-CD3 antibody, or antigen-binding fragment thereof, of any one of paragraphs 1-52.

56. A first expression vector comprising the first recombinant polynucleotide of paragraph 55 and a second expression vector comprising the second recombinant polynucleotide of paragraph 55.

57. An isolated host cell comprising the recombinant polynucleotide of paragraph 53, the expression vector of paragraph 54, the first and second recombinant polynucleotides of paragraph 55 or the first and second expression vectors of paragraph 56.

58. A method of producing the antibody, or antigen-binding fragment thereof, or any one of paragraphs 1-52, the method comprising culturing the host cell of paragraph 57 under conditions suitable for expressing the antibody or fragment.

59. A composition comprising the antibody, or antigen-binding fragment thereof, of any one of paragraphs 1-52 and a physiologically acceptable carrier.

60. A method of treating or preventing cancer in a subject in need thereof, the method comprising administering the antibody, or antigen-binding fragment thereof, of any one of paragraphs 1-52 or the composition of paragraph 59 to the subject in need thereof.

61. A method of maintaining cancer remission in a subject, the method comprising administering the antibody, or antigen-binding fragment thereof, of any one of paragraphs 1-52 or the composition of paragraph 59 to the subject in need thereof.

62. A method of targeting a T-cell to a tumor cell, wherein the method comprises contacting the T-cell with the antibody, or antigen-binding fragment thereof, any one of paragraphs 8-52 or the composition of paragraph 59.

63. The method of any one of paragraphs 60- 62, wherein the anti-CD3 antibody is an anti-CD3 bispecific antibody, wherein the bispecific antibody further comprises an anti-tumor antibody.

64. A method of treating or preventing an autoimmune disease or disorder in a subject in need thereof, the method comprising administering the antibody, or antigen-binding fragment thereof, of any one of paragraphs 1-52 or the composition of paragraph 59 to the subject in need thereof

65. The method of paragraph 64, wherein the autoimmune disease or disorder is graft-versus-host disease or type I diabetes.

EXAMPLES

EXAMPLE 1

GENERATION OF ANTI-CD3 HYBRIDOMAS

Immunizations

[00283] Two cohorts of AlivaMab® mice (AMM-XKL and AMM-LO) were immunized with recombinant human and cynomolgus CD3 proteins, followed by a boost with human T cells. Titers were checked by flow cytometry against Jurkat wild type cells and Jurkat cells with TCRβ knockout (which prevents the entire TCR complex including CD3 from reaching the cell surface) as a negative control.

Fusion and Screening

[00284] Spleen and lymph node cells were isolated from AlivaMab® Mice and enriched for IgG-antibody expressing cells, then electro-fused with cells from myeloma cell line (ID), seeded into 384 well plates and in HAT medium to select for hybridomas. Primary screening was performed by flow cytometry against Jurkat wild-type cells and Jurkat cells with TCR knockout (RT3-T3.5 cells) as a negative control using a fluorchrome-conjugated anti-mouse IgG Fc to detect binding of the chimeric AlivaMab® antibodies to the cells. Confirmatory screens were performed by ELISA against the recombinant human and cynomolgus CD3 proteins as well as by flow cytometry against Jurkat cells and human Pan-T cells. Bio-Layer Interferometry (Sartorius Octet) assays were performed to assess the kinetics of binding of the hits to recombinant human CD3 protein. Selected hits (**Table 4**, *infra*) were subcloned, scaled up for purification and sequencing by next generation sequencing (NGS).

Table 4. Flow Cytometry Analysis of Unpurified Monoclonal Antibodies

	Flow Cytometry Binding		
Hybridoma	**Jurkat WT (gMFI)**	**RT3-T3.5 (TCR-KO) (gMFI)**	**human Pan T cells (gMFI)**
CD3-Hyb1	105241	5534	529735
CD3-Hyb2	101830	4401	454617
CD3-Hyb3	100603	4551	540508
CD3-Hyb4	99450	5109	508188
CD3-Hyb5	99437	5048	480404
CD3-Hyb6	93216	4710	530445
CD3-Hyb7	91821	4993	585070
CD3-Hyb8	87587	4894	549489
CD3-Hyb9	82868	3922	548634

CD3-Hyb10	81293	4370	341704
CD3-Hyb11	80112	4347	350579
CD3-Hyb12	79579	4086	478964
CD3-Hyb13	76514	3969	447871
CD3-Hyb14	71893	4097	184589
CD3-Hyb15	71578	4065	231850
CD3-Hyb16	55653	3538	227843
CD3-Hyb17	54573	2930	157136
CD3-Hyb18	51691	3430	170643
CD3-Hyb19	46134	2531	234643
CD3-Hyb20	44971	3010	198988
CD3-Hyb21	39795	3048	114707
CD3-Hyb22	36651	2871	172601
CD3-Hyb23	34294	2823	76366
CD3-Hyb24	25319	2763	69652
CD3-Hyb25	23088	2101	91001
OKT3	72347	4223	300310
SP34	113713	7165	332761
UCHT1	102228	5408	358900
Isotype Control	1708	1818	4373

EXAMPLE 2

GENERATION OF ANTIBODY SEQUENCES FROM HYBRIDOMAS AND NGS CLUSTERS

Hybridoma Sequencing

[00285] Hybridoma cells were lysed, and RNA was isolated. First strand cDNA synthesis was performed using reverse transcriptase primed with oligo dT. Second strand synthesis was performed using a template switching oligonucleotide. Ig-encoding fragments were then generated by polymerase chain reaction using a universal upstream primer and gene-specific Ig downstream primers. Barcodes and Illumina adaptor sequences were added, and samples were sequenced using a MiSeq to generate 2x300 bp paired-end reads. Sequences were sorted by barcode and analyzed to generate nucleotide sequences from which amino acid sequences were derived.

Immune Repertoire Sequencing—Identification of Antibodies that Specifically Bind CD3

[00286] Secondary lymphoid organs were harvested from immunized mice (spleen and lymph nodes). After grinding the tissue and extracting its RNA, the samples were sequenced via paired-single cell NGS (10X-sequences) from Azenta Life Sciences. Sequences were delivered as fasta files along with a csv (comma-separated values) denoting DNA barcodes for each sequence. PipeBio Bioinformatics Suite (PipeBio ApS, Horsens, Denmark) was used to

pair heavy and light chain sequences of the same cell via their respective shared barcode sequences. Paired sequences were pre-clustered according to their VH gene and then clustered on the abundance of their H-CDR3 sequences above a Hamming Distance identity threshold. The most common sequence within the cluster was treated as its representative. The representatives of the largest clusters were cloned, as follows.

Cloning and Expression of Sequences from Immune Repertoire

[00287] Heavy chain and light chain sequences for an antibody were separately ordered as gblocks (IDT) and then stitched into an expression plasmid vector using infusion (Takara Bio). Standard molecular biology techniques were used to create the respective heavy and light chain expression plasmids for each recombinant antibody. HEK-293 (Expi293, Thermo, Carlsbad, CA) cells were transfected with the positive clones according to manufacturer's protocol. Cultures were harvested and recombinant antibodies were purified using Protein A-based chromatography methods. Purified recombinant antibodies were tested for activity against controls using the same methods for bispecific antibodies.

EXAMPLE 3

PURIFICATION OF MONOCLONAL ANTIBODIES FROM HYBRIDOMA SUPERNATANTS AND CHARACTERIZATION OF BINDING

[00288] A panel of antibodies comprising unique VH and VL sequences was purified by protein A affinity chromatography. Hybridoma supernatants were incubated with protein A beads, the beads were washed, and antibodies were eluted with acidic pH buffer and neutralized. Samples were exchanged into phosphate buffered saline (PBS) and analyzed by HPLC-SEC (**Table 5**, *infra*). Samples were evaluated by flow cytometry analysis against Jurkat and human Pan-T cells (**Figure 1B**) as well as by Octet against recombinant human CD3 proteins to evaluate apparent affinities and binding off-rates (**Table 6**, *infra*). Antibodies with diverse sequences and showing binding to recombinant CD3 protein, on $CD3^+$ cell lines and on primary cells, and with a fast off-rate were selected for reformatting into a bispecific format.

Table 5. Expression and Purification Characteristics of Antibodies from Hybridoma

Source Antibody ID	Purified Hybridoma mAbs Yield (mg/L)	SEC-HPLC		
		% HMW	% Main	% LMW
ABL-CD3-1	8	3.6	94.8	1.6
ABL-CD3-2	14	0.4	98.4	1.1

ABL-CD3-3	30	1.2	97.5	1.3
ABL-CD3-4	38	4.4	93.8	1.8
ABL-CD3-5	41	1.9	96.8	1.3
ABL-CD3-6	29	1.2	97.2	1.5
ABL-CD3-7	17	3.6	92.0	4.4
ABL-CD3-8	16	2.4	95.5	2.0
ABL-CD3-9	18	1.6	96.3	2.1
ABL-CD3-10	10	ND	ND	ND
ABL-CD3-12	93	2.1	97.6	0.4
ABL-CD3-13	18	2.4	96.5	1.1
ABL-CD3-14	67	1.1	96.8	2.1
ABL-CD3-15	12	1.2	90.2	8.7
ABL-CD3-16	23	3.0	95.2	1.9
ABL-CD3-17	21	0.8	97.7	1.5
ABL-CD3-18	34	3.6	92.7	3.6
ABL-CD3-19	93	1.2	96.4	2.4
ABL-CD3-20	114	0.4	98.6	1.0
ABL-CD3-21	23	ND	ND	ND
ABL-CD3-22	73	1.6	95.7	2.6
ABL-CD3-24	46	2.0	94.5	3.5
ABL-CD3-25	69	1.5	96.2	2.3
ABL-CD3-26	72	1.3	96.4	2.3
ABL-CD3-27	64	3.5	93.8	2.8
ABL-CD3-28	43	1.1	94.6	4.3
ABL-CD3-29	48	0.1	71.1	28.8
ABL-CD3-31	23	0.0	95.2	4.8
ABL-CD3-32	52	2.1	95.9	2.0
ABL-CD3-33	42	2.2	95.3	2.5
ABL-CD3-34	33	2.7	94.4	2.9
ABL-CD3-35	18	3.4	93.7	2.9
ABL-CD3-36	102	0.2	94.9	4.9
ABL-CD3-37	38	0.8	91.5	7.7
ABL-CD3-38	24	3.8	87.2	9.0
ABL-CD3-39	111	1.5	96.0	2.5
ABL-CD3-114	32	ND	ND	ND
ABL-CD3-41	17	3.4	93.8	2.8
ABL-CD3-42	62	1.5	95.6	2.9
ABL-CD3-43	55	2.0	94.4	3.6
ABL-CD3-44	43	4.1	93.4	2.6
ABL-CD3-45	89	2.2	95.5	2.3
ABL-CD3-46	38	2.6	92.6	4.8
ABL-CD3-47	32	2.6	93.7	3.6
ABL-CD3-48	38	0.9	96.6	2.5
ABL-CD3-49	119	8.4	90.3	1.3
ABL-CD3-50	55	8.5	89.1	2.4
ABL-CD3-51	38	3.0	95.0	2.0
ABL-CD3-52	16	3.5	90.8	5.7

ABL-CD3-53	12	0.2	94.9	5.0
ABL-CD3-54	53	1.7	93.1	5.2
ABL-CD3-55	34	7.6	88.3	4.2
ABL-CD3-56	20	0.9	92.3	6.8
ABL-CD3-57	26	2.1	93.8	4.1
ABL-CD3-58	11	2.9	91.2	5.9
ABL-CD3-59	24	1.1	93.9	5.1
ABL-CD3-60	28	0.8	94.6	4.6
ABL-CD3-61	12	2.0	93.2	4.8
ABL-CD3-62	27	2.5	92.2	5.2
ABL-CD3-63	27	0.7	93.2	6.1
ABL-CD3-64	34	2.8	93.8	3.4
ABL-CD3-65	54	3.3	92.0	4.7
ABL-CD3-66	26	1.4	92.7	5.9
ABL-CD3-67	42	1.4	94.9	3.7
ABL-CD3-68	1	ND	ND	ND
ABL-CD3-69	29	2.3	92.7	5.0
ABL-CD3-70	34	2.3	92.6	5.1
ABL-CD3-71	54	2.5	92.1	5.4
ABL-CD3-72	20	1.5	93.1	5.4
ABL-CD3-73	58	0.9	95.1	4.0
ABL-CD3-74	20	2.0	93.3	4.7
ABL-CD3-75	9	1.2	91.9	6.9
ABL-CD3-76	36	3.5	90.2	6.3
ABL-CD3-77	22	4.7	91.3	4.0
ABL-CD3-78	71	0.6	94.9	4.5
ABL-CD3-79	71	ND	ND	ND
ABL-CD3-80	3	6.2	90.1	3.7
ABL-CD3-81	6	3.6	93.1	3.3
ABL-CD3-82	34	ND	ND	ND
ABL-CD3-83	49	19.8	67.2	13.0
ABL-CD3-84	2	ND	ND	ND
ABL-CD3-85	34	2.0	92.7	5.4
ABL-CD3-86	34	2.9	92.8	4.3
ABL-CD3-87	20	1.2	94.1	4.6

*ND-not determined.

Table 6. Binding Kinetics of Purified mAbs to Recombinant CD3 Proteins

Hybridoma ID	hCD3 E/D, 200-50nM, FAB2G Sensor, 5ug/mL mAb					hCD3 E/G, 200-50nM, FAB2G Sensor, 5ug/mL mAb				
	Response	KD (M)	kdis(1/s)	kon(1/Ms)	Full R^2	Response	KD (M)	kdis(1/s)	kon(1/Ms)	Full R^2
ABL-CD3-1	0.31	1.08E-07	1.57E-02	1.45E+05	1.00	0.07	1.21E-06	1.71E-01	1.42E+05	0.94
ABL-CD3-2	0.09	4.11E-10	1.56E-03	3.80E+06	0.10	0.05	<1.0E-12	<1.0E-07	2.30E+06	0.02
ABL-CD3-3	1.03	1.04E-08	1.20E-03	1.16E+05	0.99	0.96	1.24E-08	1.43E-03	1.15E+05	0.99
ABL-CD3-4	0.32	9.45E-08	3.02E-02	3.20E+05	0.99	0.36	9.19E-08	2.21E-02	2.41E+05	0.99
ABL-CD3-5	0.36	8.81E-08	3.21E-02	3.65E+05	0.99	0.27	1.06E-07	4.49E-02	4.23E+05	0.99
ABL-CD3-6	0.30	6.97E-08	3.33E-02	4.77E+05	1.00	0.17	1.38E-07	7.79E-02	5.66E+05	1.00
ABL-CD3-7	0.86	4.14E-09	7.86E-04	1.90E+05	0.99	0.81	8.42E-09	1.42E-03	1.69E+05	0.99
ABL-CD3-8	0.11	2.83E-07	2.12E-01	7.48E+05	0.99	0.02	2.97E-10	1.49E+00	5.02E+09	0.85
ABL-CD3-9	0.34	7.08E-08	3.93E-02	5.55E+05	0.99	0.10	1.10E-07	1.14E-01	1.04E+06	0.84
ABL-CD3-10	0.52	2.47E-09	4.60E-04	1.86E+05	0.99	0.46	2.41E-09	3.90E-04	1.62E+05	0.99
ABL-CD3-12	1.21	1.06E-08	1.44E-03	1.36E+05	0.99	1.14	1.05E-08	1.24E-03	1.18E+05	0.99
ABL-CD3-13	0.08	2.34E-08	7.28E-04	3.12E+04	0.96	0.01	<1.0E-12	<1.0E-07	2.67E+04	0.34
ABL-CD3-14	0.17	1.28E-08	1.52E-03	1.19E+05	0.97	0.08	9.66E-09	2.87E-03	2.98E+05	0.94
ABL-CD3-15	0.93	1.62E-09	2.76E-04	1.71E+05	0.99	0.83	6.54E-09	1.13E-03	1.73E+05	1.00
ABL-CD3-16	0.19	2.95E-08	1.53E-03	5.19E+04	0.99	0.01	<1.0E-12	<1.0E-07	3.62E+04	0.63
ABL-CD3-17	0.22	1.03E-07	3.18E-02	3.09E+05	0.97	0.09	2.10E-07	1.32E-01	6.27E+05	0.91
ABL-CD3-18	0.07	<1.0E-12	<1.0E-07	2.91E+04	0.60	0.04	<1.0E-12	<1.0E-07	2.70E+04	0.49
ABL-CD3-19	0.60	2.33E-08	1.91E-03	8.17E+04	1.00	0.40	6.29E-08	6.65E-03	1.06E+05	1.00
ABL-CD3-20	0.51	1.05E-08	2.29E-03	2.19E+05	0.99	0.45	1.83E-08	3.79E-03	2.07E+05	0.99
ABL-CD3-21	0.27	9.53E-08	3.60E-02	3.78E+05	0.98	0.11	1.30E-07	9.94E-02	7.66E+05	0.79
ABL-CD3-22	0.08	4.92E-08	5.13E-03	1.04E+05	0.96	0.02	1.44E-08	6.39E-03	4.44E+05	0.85
ABL-CD3-24	0.93	5.78E-09	1.01E-03	1.75E+05	0.99	0.89	8.48E-09	1.34E-03	1.58E+05	0.99
ABL-CD3-25	1.32	8.56E-09	9.33E-04	1.09E+05	0.99	1.27	1.17E-08	1.13E-03	9.66E+04	1.00
ABL-CD3-26	1.03	6.66E-09	1.04E-03	1.56E+05	0.99	1.01	9.31E-09	1.23E-03	1.32E+05	0.99
ABL-CD3-27	0.39	2.31E-09	5.28E-04	2.28E+05	0.96	0.03	3.65E-09	1.56E-03	4.28E+05	0.64
ABL-CD3-28	0.77	7.88E-09	1.33E-03	1.68E+05	0.99	0.77	5.60E-09	7.98E-04	1.43E+05	0.99

ABL-CD3-29	0.46	2.63E-09	8.16E-04	3.10E+05	0.94	0.44	2.50E-09	8.52E-04	3.41E+05	0.94
ABL-CD3-31	0.32	6.66E-09	1.49E-03	2.23E+05	0.94	0.30	5.64E-09	1.73E-03	3.06E+05	0.92
ABL-CD3-32	0.36	3.89E-08	1.52E-02	3.90E+05	0.95	0.40	3.16E-08	9.62E-03	3.05E+05	0.96
ABL-CD3-33	0.33	5.62E-08	2.06E-02	3.66E+05	0.96	0.34	6.00E-08	1.55E-02	2.59E+05	0.96
ABL-CD3-34	0.93	9.01E-09	2.11E-03	2.34E+05	0.98	0.89	9.82E-09	1.96E-03	1.99E+05	0.98
ABL-CD3-35	0.36	5.47E-08	2.71E-02	4.95E+05	0.97	0.12	1.42E-08	1.44E-02	1.02E+06	0.84
ABL-CD3-36	0.49	2.50E-08	1.01E-03	4.04E+04	1.00	0.02	4.18E-09	7.29E-03	1.74E+06	0.76
ABL-CD3-37	0.09	1.78E-08	4.04E-03	2.27E+05	0.92	0.05	1.43E-09	2.69E-03	1.89E+06	0.59
ABL-CD3-38	0.73	1.41E-09	3.50E-04	2.48E+05	0.97	0.73	1.36E-09	3.31E-04	2.43E+05	0.98
ABL-CD3-39	0.41	8.32E-09	3.07E-04	3.69E+04	1.00	0.00	<1.0E-12	<1.0E-07	5.00E+04	0.00
ABL-CD3-40	0.05	<1.0E-12	<1.0E-07	1.77E+04	0.60	0.06	<1.0E-12	<1.0E-07	2.28E+04	0.49
ABL-CD3-41	0.34	8.50E-08	3.95E-02	4.64E+05	1.00	0.10	2.95E-07	2.50E-01	8.46E+05	0.99
ABL-CD3-42	0.10	2.55E-07	9.95E-03	3.90E+04	0.99	0.00	<1.0E-12	3.85E-01	4.44E+89	0.37
ABL-CD3-43	0.62	6.20E-09	7.54E-04	1.22E+05	0.99	0.62	6.94E-09	1.04E-03	1.50E+05	0.98
ABL-CD3-44	0.03	3.56E-07	1.84E-04	5.17E+02	0.98	0.00	<1.0E-12	7.44E-01	1.27E+134	0.90
ABL-CD3-45	0.20	1.37E-08	4.75E-04	3.46E+04	1.00	0.03	1.58E-08	3.75E-03	2.37E+05	0.84
ABL-CD3-46	1.02	9.48E-09	1.71E-03	1.80E+05	0.99	0.88	1.63E-08	3.33E-03	2.04E+05	0.98
ABL-CD3-47	0.62	1.69E-08	2.91E-03	1.72E+05	0.99	0.43	3.62E-08	7.85E-03	2.17E+05	0.99
ABL-CD3-48	1.17	1.15E-08	1.14E-03	9.93E+04	0.99	1.03	1.79E-08	1.79E-03	1.00E+05	0.99
ABL-CD3-49	0.93	6.52E-09	1.31E-03	2.00E+05	0.99	0.82	1.14E-08	2.53E-03	2.23E+05	0.98
ABL-CD3-50	0.57	2.10E-08	4.70E-03	2.24E+05	0.99	0.60	1.26E-08	2.47E-03	1.96E+05	0.99
ABL-CD3-51	0.21	7.71E-08	1.88E-02	2.44E+05	0.98	0.06	2.33E-07	1.63E-01	6.99E+05	0.98
ABL-CD3-52	0.35	5.40E-08	2.02E-02	3.73E+05	0.98	0.14	2.33E-07	1.15E-01	4.95E+05	0.98
ABL-CD3-53	0.24	1.46E-07	1.99E-02	1.36E+05	0.99	0.40	8.87E-08	7.14E-03	8.05E+04	0.99
ABL-CD3-54	0.87	1.76E-08	2.67E-03	1.52E+05	0.99	0.87	1.93E-08	2.58E-03	1.34E+05	0.99
ABL-CD3-55	0.13	1.83E-07	6.90E-02	3.76E+05	0.99	0.08	1.41E-07	8.94E-02	6.36E+05	0.99
ABL-CD3-56	1.24	3.96E-09	5.22E-04	1.32E+05	0.99	1.30	9.40E-10	1.02E-04	1.09E+05	0.99
ABL-CD3-57	0.49	4.29E-09	2.77E-04	6.47E+04	0.98	0.54	3.97E-09	2.60E-04	6.54E+04	0.99
ABL-CD3-58	0.57	4.41E-08	2.65E-03	6.01E+04	1.00	0.28	4.52E-08	7.05E-03	1.56E+05	0.94
ABL-CD3-59	0.81	1.27E-08	1.05E-03	8.31E+04	1.00	0.58	4.33E-08	4.87E-03	1.13E+05	0.99

ABL-CD3-60	0.10	2.31E-07	9.62E-02	4.17E+05	0.99	0.07	9.07E-08	5.83E-02	6.42E+05	0.98
ABL-CD3-61	0.26	1.17E-07	2.18E-02	1.87E+05	0.98	0.07	6.92E-08	4.02E-02	5.81E+05	0.95
ABL-CD3-62	0.56	3.40E-08	7.65E-03	2.25E+05	0.98	0.69	2.38E-08	3.91E-03	1.64E+05	0.98
ABL-CD3-63	0.89	1.15E-08	1.45E-03	1.27E+05	0.99	0.34	9.04E-08	1.82E-02	2.02E+05	0.98
ABL-CD3-64	0.68	3.16E-08	5.40E-03	1.71E+05	0.99	0.46	7.19E-08	1.30E-02	1.80E+05	0.99
ABL-CD3-65	0.01	2.27E-08	6.43E-03	2.83E+05	0.59	0.01	1.87E-08	1.74E-03	9.32E+04	0.88
ABL-CD3-66	0.41	7.82E-08	2.66E-02	3.41E+05	0.99	0.09	9.28E-08	8.56E-02	9.23E+05	0.98
ABL-CD3-67	0.58	5.33E-08	4.85E-03	9.08E+04	0.99	0.26	1.09E-07	1.78E-02	1.63E+05	0.97
ABL-CD3-68	0.30	4.20E-09	9.73E-04	2.32E+05	0.98	0.28	6.43E-09	1.57E-03	2.44E+05	0.98
ABL-CD3-69	0.87	8.14E-09	8.51E-04	1.05E+05	0.99	0.88	3.73E-09	3.21E-04	8.61E+04	0.99
ABL-CD3-70	0.26	4.71E-08	1.01E-02	2.14E+05	0.94	0.11	4.87E-09	3.39E-03	6.97E+05	0.85
ABL-CD3-71	0.48	5.88E-08	1.02E-02	1.73E+05	0.99	0.11	5.50E-08	3.29E-02	5.98E+05	0.86
ABL-CD3-72	0.17	1.09E-07	7.00E-02	6.41E+05	0.98	0.09	4.42E-07	2.11E-01	4.76E+05	0.99
ABL-CD3-73	1.02	1.26E-09	1.00E-04	7.97E+04	0.99	0.99	6.12E-09	4.72E-04	7.70E+04	1.00
ABL-CD3-74	0.24	5.56E-08	2.60E-02	4.67E+05	0.97	0.13	1.24E-07	6.09E-02	4.92E+05	0.99
ABL-CD3-75	0.56	2.96E-08	7.26E-03	2.45E+05	0.98	0.19	1.59E-07	5.93E-02	3.73E+05	0.98
ABL-CD3-76	0.53	4.82E-08	1.25E-02	2.60E+05	0.98	0.24	1.34E-07	4.61E-02	3.45E+05	0.99
ABL-CD3-77	0.01	<1.0E-12	1.35E-02	9.36E+12	0.61	-0.01	<1.0E-12	<1.0E-07	5.00E+04	0.00
ABL-CD3-78	0.56	6.64E-09	5.68E-04	8.56E+04	1.00	0.50	2.14E-08	1.57E-03	7.35E+04	1.00
ABL-CD3-79	0.22	1.20E-07	4.73E-02	3.93E+05	0.99	0.07	4.12E-07	1.62E-01	3.93E+05	0.99
ABL-CD3-80	0.36	1.25E-07	1.08E-02	8.62E+04	0.99	0.11	1.48E-07	3.60E-02	2.43E+05	0.95
ABL-CD3-81	0.17	2.83E-07	1.07E-01	3.78E+05	1.00	0.04	9.12E-07	6.92E-01	7.59E+05	0.95
ABL-CD3-82	0.02	1.06E-08	1.92E-03	1.82E+05	0.82	0.02	3.18E-09	1.97E-03	6.20E+05	0.81
ABL-CD3-83	0.03	2.20E-08	8.82E-03	4.01E+05	0.89	0.01	3.76E-08	6.49E-03	1.73E+05	0.77
ABL-CD3-84	0.22	1.43E-07	2.03E-02	1.42E+05	0.98	0.10	1.45E-07	6.14E-02	4.24E+05	0.95
ABL-CD3-85	0.042*	2.79E-08	6.89E-03	2.47E+05	0.99	0.64	2.98E-08	6.08E-03	2.04E+05	0.98
ABL-CD3-86	1.10	3.88E-09	7.11E-04	1.84E+05	0.99	1.17	3.52E-09	5.58E-04	1.58E+05	0.99
ABL-CD3-87	0.0358*	6.90E-08	1.66E-02	2.40E+05	0.98	0.36	1.31E-07	2.79E-02	2.14E+05	0.99

* Purified mAbs were assessed by Octet against recombinant human CD3E/D proteins.

EXAMPLE 4

GENERATION AND CHARACTERIZATION OF BISPECIFIC ANTIBODIES

Generation of Plasmids Encoding Bispecific Constructs

[00289] Sequences derived from hybridoma candidates were selected for cloning based on FACS and Octet analysis as described in Example 3. These were reformatted as scFv in VL-VH and VH-VL orientations of the variable heavy and light chains. These were made as disulfide bond stabilized scFv by mutating VH44 and VL100 to Cys (Kabat numbering). These scFvs were cloned onto an Fc from a human IgG1 antibody and paired with a Fab derived from gemtuzumab also cloned onto an Fc from a human IgG1 antibody. Production of BiSAbs as hetero-dimers was driven by a knobs-into-holes (KiH) approach (Merchant et al., Nat Biotechnol, 16:677-81, 1998) achieved by introducing two amino acid changes in CH3 domain (S354C/T366W) for knob and four amino acid changes Y349C/T366S/L368A/Y407V for hole (according to Eu numbering). Further, the hole is mutated to eliminate protein A binding (H435R/Y436F). In this way, the knob can bind to protein A and the hole can bind to Fab-selective resins, offering multiple purification options. The knob mutations were introduced into the Fc of the anti-CD3 antibody, and the hole mutations were introduced into the Fc of gemtuzumab. Additionally, L234F/L235E/P331S (*i.e.* "triple mutation" or "TM") were introduced into the Fc regions of both arms of the bispecific antibodies to reduce effector function. *See, e.g.*, Oganesyan V, et al., *Acta Crystallogr D Biol Crystallogr*. 2008 Jun; 64(Pt 6):700-4, which is incorporated herein by reference in its entirety.

[00290] Cloning into TGEX eukaryotic expression vectors was performed with Takara Infusion HD using standard molecular biology techniques. Positive clones were confirmed by rolling circle amplification (RCA) followed by Sanger sequencing and milligram quantity DNA was made using Endo-EF maxiprep kit (Takara) to achieve low endotoxin levels. The panel of CD3 stabilized scFv-knob Fcs were then transfected along with gemtuzumab-hole HC and gemtuzumab LC in Expi293 to make KiH BisAbs (**Figure 2**, **Table 7**, *infra*).

Gemtuzumab HC Hole/RF/TM (SEQ ID NO: 1150):
EVQLVQSGAEVKKPGSSVKVSCKASGYTITDSNIHWVRQAPGQSLEWIGYIYPYNGG
TDYNQKFKNRATLTVDNPTNTAYMELSSLRSEDTAFYYCVNGNPWLAYWGQGTLV
TVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFP
AVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPC

PAPEFEGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHN
AKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPASIEKTISKAKGQ
PREPQVCTLPPSREEMTKNQVSLSCAVKGFYPSDIAVEWESNGQPENNYKTTPPVLD
SDGSFFLVSKLTVDKSRWQQGNVFSCSVMHEALHNRFTQKSLSLSPGK

Gemtuzumab LC (SEQ ID NO: 1151):
DIQLTQSPSTLSASVGDRVTITCRASESLDNYGIRFLTWFQQKPGKAPKLLMYAASNQ
GSGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQTKEVPWSFGQGTKVEVKRTVA
APSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDS
KDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

Table 7. Bispecific Antibody Expression Characteristics

Bispecific Antibody	Anti-CD3 Antibody in Bispecific Antibody	Titer	SEC-HPLC		
		(mg/L)	% HMW	% Main	% LMW
CD3xCD33-BspAb1	ABL-CD3-13_scFv_VH-VL	195.56	10.03	89	0.70
CD3xCD33-BspAb2	ABL-CD3-16_(C to S HC)_scFv_VH-VL	170.14	8.45	91	0.55
CD3xCD33-BspAb3	ABL-CD3-16_(C to Y HC)_scFv_VH-VL	111.05	5.84	93	0.69
CD3xCD33-BspAb4	ABL-CD3-3_scFv_VH-VL	80.51	6.51	93	0.92
CD3xCD33-BspAb5	ABL-CD3-4_(E added to HC, G to C LC)_scFv_VH:VL	168.45	5.49	94	0.69
CD3xCD33-BspAb6	ABL-CD3-2_scFv_VH-VL	31.82	11.76	87	0.86
CD3xCD33-BspAb7	ABL-CD3-6_(NHS to QHS LC)_scFv-VH-VL	66.05	8.02	90	2.36
CD3xCD33-BspAb8	ABL-CD3-8_(NHS to QHS LC)_scFv_VH-VL	108.74	1.83	97	0.82
CD3xCD33-BspAb9	ABL-CD3-9 (NHC to QHS LC)_scFv_VH-VL	30.18	10.74	88	1.62
CD3xCD33-BspAb10	ABL-CD3-1_scFv_VH-VL	143.75	3.29	96	1.04
CD3xCD33-BspAb11	ABL-CD3-14_(C to S HC)_scFv_VH-VL	24.65	21.48	78	0.94
CD3xCD33-BspAb12	ABL-CD3-14_(C to F HC)_scFv_VH-VL	113.41	3.17	96	0.91
CD3xCD33-BspAb13	ABL-CD3-7_scFv_VH-VL	277.35	8.48	90	1.81
CD3xCD33-BspAb14	ABL-CD3-5_scFv-VH-VL	184.59	7.42	92	0.83
CD3xCD33-BspAb15	ABL-CD3-17_scFv_VH-VL	59.54	7.19	91	1.52
CD3xCD33-BspAb16	ABL-CD3-10 (C to S)_scFv_VH-VL	141.18	1.44	97	1.33

CD3xCD33-BspAb17	ABL-CD3-11_scFv_VH-VL	165.12	4.07	95	0.82
CD3xCD33-BspAb18	ABL-CD3-13_scFv_VH-VL	123.76	23.85	75	0.66
CD3xCD33-BspAb19	ABL-CD3-16 (C to S HC)_scFv_VL-VH	161.94	18.32	81	1.04
CD3xCD33-BspAb20	ABL-CD3-16 (C to Y HC)_scFv_VL-VH	96.24	12.64	87	0.86
CD3xCD33-BspAb21	ABL-CD-3-3_scFv_VL-VH	112.38	8.67	90	1.16
CD3xCD33-BspAb22	ABL-CD3-4_(E added to HC, G to C LC) _scFv_VL-VH	117.81	20.62	78	0.90
CD3xCD33-BspAb23	ABL-CD3-2_scFv_VL-VH	123.14	6.81	93	0.69
CD3xCD33-BspAb24	ABL-CD3-6 (NHS to QHS LC)_scFv_VL-VH	88.96	10.70	88	0.99
CD3xCD33-BspAb25	ABL-CD3-8 (NHS to QHS LC)_scFv_VL-VH	109.82	5.83	94	0.55
CD3xCD33-BspAb26	ABL-CD3-9 (NHC to QHS LC)_scFv_VL-VH	21.37	24.55	58	17.32
CD3xCD33-BspAb27	ABL-CD3-1_scFv_VL-VH	130.32	7.12	92	1.14
CD3xCD33-BspAb28	ABL-CD3-14_(C to S HC)_scFv_VL-VH	34.69	11.26	88	0.47
CD3xCD33-BspAb29	ABL-CD3-14_(C to F HC)_scFv_VL-VH	75.84	15.37	83	1.68
CD3xCD33-BspAb30	ABL-CD3-7_scFv_VL-VH	120.02	3.53	95	1.14
CD3xCD33-BspAb31	ABL-CD3-5_scFv_VL-VH	120.22	10.56	88	1.15
CD3xCD33-BspAb32	ABL-CD3-17_scFv_VL-VH	32.89	4.93	92	2.76
CD3xCD33-BspAb33	ABL-CD3-10 (C to S)_scFv_VL-VH	87.64	2.14	84	13.51
CD3xCD33-BspAb34	ABL-CD3-11_scFv_VL-VH	67.54	22	75	3.30
CD3xCD33-BspAb35	ABL-CD3-13A_scFv_VH-VL	39.53	2.36	92	5.60
CD3xCD33-BspAb36	ABL-CD3-16A (C to S in HC)_scFv_VH-VL	63.75	3.91	91	4.76
CD3xCD33-BspAb37	ABL-CD3-16 (C to Y in HC)_scFv_VH-VL	48.79	2.4	93	4.81
CD3xCD33-BspAb38	ABL-CD3-3A_scFv_VH-VL	59.41	1.23	95	3.95
CD3xCD33-BspAb39	ABL-CD3-2A_scFv_VH-VL	65.06	2.41	93	4.18
CD3xCD33-BspAb40	ABL-CD3-6A (NHS to QHS in LC)_scFv_VH-VL	28.24	1.98	92	5.54
CD3xCD33-BspAb41	ABL-CD3-8A (NHS to QHS in LC)_scFv_VH-VL	25.40	0.05	96	4.38
CD3xCD33-BspAb42	ABL-CD3-1A_scFv_VH-VL	54.03	2.37	93	4.16
CD3xCD33-BspAb43	ABL-CD3-14A_(C to F HC)_scFv_VH-VL	39.53	0.92	95	4.22

CD3xCD33-BspAb44	ABL-CD3-7A_scFv_VH-VL	49.79	1.46	94	4.90
CD3xCD33-BspAb45	ABL-CD3-5A_scFv_VH-VL	71.43	4.55	92	3.28
CD3xCD33-BspAb46	ALB-CD3-17A_scFv_VH-VL	23.72	1.33	96	3.13
CD3xCD33-BspAb47	ABL-CD3-10A (C to S)_scFv_VH-VL	31.90	3.01	89	8.41
CD3xCD33-BspAb48	ABL-CD3-11A_scFv_VH-VL	61.08	13.12	80	6.75
CD3xCD33-BspAb49	ABL-CD3-13A_scFv_VL-VH	31.90	6.15	89	4.76
CD3xCD33-BspAb50	ABL-CD3-16A (C to S in HC)_scFv_VL-VH	61.44	9.21	85	5.52
CD3xCD33-BspAb51	ABL-CD3-16A (C to Y in HC)_scFv_VL-VH	46.17	2.29	92	5.66
CD3xCD33-BspAb52	ABL-CD-3A_scFv_VL-VH	53.18	4.61	86	9.43
CD3xCD33-BspAb53	ABL-CD3-4A_(E added to HC, G to C LC)_scFv_VL-VH	35.97	2.47	93	4.23
CD3xCD33-BspAb54	ABL-CD3-2A_scFv_VL-VH	55.03	1.91	93	5.26
CD3xCD33-BspAb55	ABL-CD3-6A (NHS to QHS in LC)_scFv_VL-VH	36.28	0.94	94	5.00
CD3xCD33-BspAb56	ABL-CD3-8A (NHS to QHS in LC)_scFv_VL-VH	30.91	2.62	94	3.64
CD3xCD33-BspAb57	ABL-CD3-9A (NHC to QHS in LC)_scFv_VL-VH	19.43	9.28	74	16.79
CD3xCD33-BspAb58	ABL-CD3-1A_scFv_VL-VH	39.53	0.36	96	3.68
CD3xCD33-BspAb59	ABL-CD3-14A (C to S HC)_scFv_VL-VH	28.92	0.41	89	10.08
CD3xCD33-BspAb60	ABL-CD3-14A (C to F HC)_scFv_VL-VH	38.40	0.42	96	3.25
CD3xCD33-BspAb61	ABL-CD3-7A_scFv_VL-VH	48.70	0.58	94	5.28
CD3xCD33-BspAb62	ABL-CD3-5A_scFv_VL-VH	72.74	2.57	91	6.52
CD3xCD33-BspAb63	ABL-CD3-17A_scFv_VL-VH	22.01	2.61	92	5.82
CD3xCD33-BspAb64	ABL-CD3-10A (C to S)_scFv_VL-VH	51.78	0.74	16	83.62
CD3xCD33-BspAb65	ABL-CD3-11A_scFv_VL-VH	43.19	1.81	95	3.23
CD3xCD33-BspAb66	SEQ ID NO: 1154, *infra*	49.79	1	92	7.44
CD3xCD33-BspAb67	ABL-CD3-45A_scFv_VH-VL	29.25	-	100.00	-
CD3xCD33-BspAb68	ABL-CD3-49A_scFv_VH-VL	68.5	2.93	97.07	-
CD3xCD33-BspAb69	ALB-CD3-52A_scFv_VH-VL	29.92	4.85	95.16	-
CD3xCD33-BspAb70	ABL-CD3-74A_scFv_VH-VL	20.13	-	88.45	-

CD3xCD33-BspAb71	ABL-CD3-21A_scFv_VH-VL	25.13	-	100.00	-
CD3xCD33-BspAb72	ABL-CD3-22A_scFv_VH-VL	107.74	8.1	91.9	-
CD3xCD33-BspAb73	ABL-CD3-41A_scFv_VH-VL	64.84	-	100	-
CD3xCD33-BspAb74	ABL-CD3-56A_scFv_VH-VL	34.73	_	89.38	6.19
CD3xCD33-BspAb75	ABL-CD3-85A_scFv_VH-VL	31.48	_	95.03	4.97
CD3xCD33-BspAb76	ABL-CD3-85B_scFv_VH-VL	68.72	6.65	92.49	-
CD3xCD33-BspAb77	ABL-CD3-72A_scFv_VH-VL	72.75	5.17	94.82	-
CD3xCD33-BspAb78	ABL-CD3-87A_scFv_VH-VL	205.7	6.06	93.94	-
CD3xCD33-BspAb79	ABL-CD3-66A_scFv_VH-VL	172.92	3.06	96.94	-
CD3xCD33-BspAb80	ABL-CD3-63A_scFv_VH-VL	85.96	-	100	-
CD3xCD33-BspAb81	ABL-CD3-81A_scFv_VH-VL	81.53	6.11	93.88	-
CD3xCD33-BspAb82	ABL-CD3-20A_scFv_VH-VL	37.71	-	100	-
CD3xCD33-BspAb83	ABL-CD3-56A_scFv_VH-VL	32.82	-	100	-
CD3xCD33-BspAb84	ABL-CD3-64A_scFv_VH-VL	141.81	4.78	95.22	-
CD3xCD33-BspAb85	ABL-CD3-62A_scFv_VH-VL	168.96	7.09	92.91	_
CD3xCD33-BspAb86	ABL-CD3-61A_scFv_VH-VL	62.16	-	100	-
CD3xCD33-BspAb87	ABL-CD3-79A_scFv_VH-VL	41.05	14.05	85.67	-
CD3xCD33-BspAb88	ABL-CD3-27A_scFv_VH-VL	85.85	2.02	97.98	-
CD3xCD33-BspAb89	ABL-CD3-89A_scFv_VH-VL	79.73	_	100	_
CD3xCD33-BspAb90	ABL-CD3-88A_scFv_VH-VL	106.28	7.15	92.85	-
CD3xCD33-BspAb91	ABL-CD3-36A_scFv_VL-VH	60.06	2.73	97.27	-
CD3xCD33-BspAb92	ABL-CD3-45A_scFv_VL-VH	115.32	5.6	94.4	-
CD3xCD33-BspAb93	ABL-CD3-47A_scFv_VL-VH	27.4	-	100	-
CD3xCD33-BspAb94	ABL-CD3-53A_scFv_VL-VH	38.25	-	100	-
CD3xCD33-BspAb95	ABL-CD3-49A_scFv_VL-VH	115.44	1.36	98.64	-
CD3xCD33-BspAb96	ABL-CD3-41A_scFv_VL-VH	73.36	-	100	-
CD3xCD33-BspAb97	ABL-CD3-76A_scFv_VL-VH	124.86	12.75	87.25	-

CD3xCD33-BspAb98	ABL-CD3-34A_scFv_VL-VH	87.85	-	100	-
CD3xCD33-BspAb99	ABL-CD3-37A_scFv_VL-VH	43.74	-	97.6	-
CD3xCD33-BspAb100	ABL-CD3-76A_scFv_VH-VL	28.03	-	81.43	-
CD3xCD33-BspAb101	ABL-CD3-37A_scFv_VH-VL	26.87	6.36	93.64	-
CD3xCD33-BspAb102	ABL-CD3-40A_scFv_VL-VH	145.08	2.76	97.24	-
CD3xCD33-BspAb103	ABL-CD3-40A_scFv_VH-VL	75.24	11.55	88.44	-
CD3xCD33-BspAb104	ABL-CD3-43A_scFv_VL-VH	45.6	14.77	85.23	-
CD3xCD33-BspAb105	ABL-CD3-52A_scFv_VL-VH	56.38	4.43	95.57	-
CD3xCD33-BspAb106	ABL-CD3-74A_scFv_VL-VH	37.97	-	100	-
CD3xCD33-BspAb107	ABL-CD3-21A_scFv_VL-VH	34.65	-	100	-
CD3xCD33-BspAb108	ABL-CD3-22A_scFv_VL-VH	98.2	4.3	95.69	-
CD3xCD33-BspAb109	ABL-CD3-68A_scFv_VL-VH	22.91	13.37	86.63	-
CD3xCD33-BspAb110	ABL-CD3-85A_scFv_VL-VH	84.26	3.10	96.90	-
CD3xCD33-BspAb111	ABL-CD3-85B_scFv_VL-VH	86.29	3.95	96.05	-
CD3xCD33-BspAb112	ABL-CD3-72A_scFv_VL-VH	54.01	4.29	95.71	-
CD3xCD33-BspAb113	ABL-CD3-87A_scFv_VL-VH	293.89	18.96	81.04	-
CD3xCD33-BspAb114	ABL-CD3-66A_scFv_VL-VH	174.4	1.09	98.91	-
CD3xCD33-BspAb115	ABL-CD3-63A_scFv_VL-VH	86.22	-	100	-
CD3xCD33-BspAb116	ABL-CD3-81A_scFv_VL-VH	115.59	7.09	92.91	-
CD3xCD33-BspAb117	ABL-CD3-20A_scFv_VL-VH	74.25	-	100	-
CD3xCD33-BspAb118	ABL-CD3-56A_scFv_VL-VH	65.42	2.11	97.89	-
CD3xCD33-BspAb119	ABL-CD3-64A_scFv_VL-VH	148.46	10.41	89.58	-
CD3xCD33-BspAb120	ABL-CD3-62A_scFv_VL-VH	238.78	13.96	86.04	-
CD3xCD33-BspAb121	ABL-CD3-61A_scFv_VL-VH	36.55	-	100	-
CD3xCD33-BspAb122	ABL-CD3-79A_scFv_VL-VH	35.66	5.8	94.2	-
CD3xCD33-BspAb123	ABL-CD3-27A_scFv_VL-VH	50.01	-	100	-
CD3xCD33-BspAb124	ABL-CD3-89A_scFv_VL-VH	119.16	-	100	-

CD3xCD33-BspAb125	ABL-CD3-88A_scFv_VL-VH	84.92	12.13	87.88	-
CD3xCD33-BspAb126	ABL-CD3-71A_scFv_VH-VL	75.3	4.45	95.55	-

[00291] As controls, scFvs were generated for high and low affinity versions of a humanized anti-CD3 antibody, as well as a CD3δε-specific control antibody. These sequences were fused to knob Fc and expressed as described for other anti-CD3 antibodies above.

Control Humanized anti-CD3 (high affinity) scFv-Fc knob/TM (SEQ ID NO: 1152):
EVQLVESGGGLVQPGGSLRLSCAASGFTFSTYAMNWVRQAPGKGLEWVGRIRSKY
NNYATYYADSVKGRFTISRDDSKNTLYLQMNSLRAEDTAVYYCVRHGNFGDSYVS
WFAYWGQGTLVTVSSGKPGSGKPGSGKPGSGKPGSQAVVTQEPSLTVSPGGTVTLT
CGSSTGAVTTSNYANWVQQKPGKSPRGLIGGTNKRAPGVPARFSGSLLGGKAALTIS
GAQPEDEADYYCALWYSNHWVFGGGTKLTVLGGGGSDKTHTCPPCPAPEFEGGPS
VFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQ
YNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPASIEKTISKAKGQPREPQVYTL
PPCREEMTKNQVSLWCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYS
KLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

Control Humanized anti-CD3 (low affinity) scFv-Fc knob/TM (SEQ ID NO: 1153):
EVQLVESGGGLVQPGGSLRLSCAASGFTFSTYAMNWVRQAPGKGLEWVGRIRSKY
NNYATYYADSVKGRFTISRDDSKNTLYLQMNSLRAEDTAVYYCVRHGNFGDSYVS
WFDYWGQGTLVTVSSGKPGSGKPGSGKPGSGKPGSQAVVTQEPSLTVSPGGTVTLT
CGSSTGAVTTSNYANWVQQKPGKSPRGLIGGTNKRAPGVPARFSGSLLGGKAALTIS
GAQPEDEADYYCALWYSNHWVFGGGTKLTVLGGGGSDKTHTCPPCPAPEFEGGPS
VFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQ
YNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPASIEKTISKAKGQPREPQVYTL
PPCREEMTKNQVSLWCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYS
KLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

CD3δε-specific control antibody scFv-Fc knob/TM (CD3xCD33-BspAb66) (SEQ ID NO: 1154):
EVQLVESGGGLVQPGRSLRLSCAASGFTFDDYAMHWVRQAPGKGLEWVSGISWNS
GSIGYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTALYYCAKDSRGYGDYRLGGA

YWGQGTLVTVSSGGGGSGGGGSGGGGSGGGGSEIVMTQSPATLSVSPGERATLSCR
ASQSVSSNLAWYQQKPGQAPRLLIYGASTRATGIPARFSGSGSGTEFTLTISSLQSEDF
AVYYCQQYNNWPWTFGQGTKVEIKTSGPGGPDKTHTCPPCPAPEFEGGPSVFLFPPK
PKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRV
VSVLTVLHQDWLNGKEYKCKVSNKALPASIEKTISKAKGQPREPQVYTLPPCREEMT
KNQVSLWCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSR
WQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

Expression and Purification of Bispecific Constructs

[00292] Antibodies were expressed in Expi293 (HEK) cells following Thermofisher guidelines for the Expi293 Expression System (Publication number MAN0007814). Antibodies were expressed in 30 mL cultures in 125 mL Thomson Flasks (PN: 931110).

[00293] Antibodies were harvested after 4 days of expression by adding diatomaceous earth into the expression flask and filtered using 0.2 um Steriflips (Millipore PN: SCGP00525). The collected supernatants were purified on an Akta Pure using a 1 mL HiTrap MabSelect SuRe column with a loading flow rate of 4 mL/min. Once loaded, the column was washed with 5 CV of PBS and antibodies were eluted with 50 mM sodium acetate pH 3.5 and neutralized with 1 M tris pH 8.0. After neutralization antibodies were buffer exchanged into 1 x PBS pH 7.4 using 50 kD MWCO spin concentrators (Sartorious PN:VS0632) by concentrating the neutralized eluted antibodies then filling the spin concentrator to the 6 mL mark and concentrating again. This was repeated 3 times to ensure complete buffer exchange.

[00294] After the antibodies were eluted the concentration and yield was determined by NanoDrop. Antibody quality was analyzed by SEC-HPLC on a TSKgel SuperSW3000 (4.6 mm ID x 30 cm, 4 um, Tosoh PN: 18675) column equipped with a guard column (Tosoh) using 0.1 M NaPO4 and 0.1 M NaSO4 pH 6.8 at a flow rate of 0.35 mL/min. Peak analysis was done using CDS Open Lab 2.6.

Binding Assays Performed Using Bispecific Antibodies

[00295] A panel of bispecific antibodies was assessed for binding specificity by flow cytometry using Jurkat WT versus Jurkat TCRb knockout cells, Pan-T cells, and CD33 expressing cells using Goat anti-human IgG Fc (Jackson ImmunoReasearch Labs, Inc., West Grove, PA, cat# 109-605-098) (**Table 8**, *infra*). In addition, a subset of bispecific antibodies was tested for binding to recombinant CD3 proteins by Octet (**Table 9**, *infra*).

Table 8. Binding of Bispecific Antibodies by Flow Cytometry.

Bispecific Antibody	Jurkat WT at 10ug/ml	Jurkat KO at 10ug/ml	KILR-HL60 at 10ug/ml	Jurkat WT at 1ug/ml	Jurkat KO at 1ug/ml	KILR-HL60 at 1ug/ml
CD3xCD33-BspAb36	26107	3547	746131	12459	2875	569075
CD3xCD33-BspAb38	34072	3720	476341	23699	3339	635122
CD3xCD33-BspAb39	2736	2393	572212	2155	2604	540698
CD3xCD33-BspAb42	26425	3292	485364	12154	2966	453491
CD3xCD33-BspAb44	84844	6435	475073	113405	7549	639856
CD3xCD33-BspAb45	38314	3638	741077	19214	3664	640144
CD3xCD33-BspAb51	24289	3844	690666	11987	3008	509216
CD3xCD33-BspAb37	32767	3558	757807	10922	2933	486159
CD3xCD33-BspAb48	10810	2604	482530	4140	2414	566282
CD3xCD33-BspAb50	33901	3403	464863	9701	2863	475294
CD3xCD33-BspAb52	31959	3808	651570	15287	3491	756118
CD3xCD33-BspAb61	84839	4825	537674	95572	6023	621381
CD3xCD33-BspAb62	59000	6093	594872	62472	5298	294996
CD3xCD33-BspAb65	3216	2250	605191	2363	2297	533387
CD3xCD33-BspAb66	23096	3039	499348	6659	2681	569137
High affinity Control	38390	5314	647770	37881	5481	543891
Low affinity Control	3227	2467	622703	2616	2822	534945
Gemtuzumab	2569	2818	351424	2574	3003	320644
hIgG1	2391	2620	30195	2700	2830	34335
No mAb	2358	2529	7580	2659	2882	7691
OKT3	35846	3677	11587	82070	5185	14784

Table 9. Binding of Bispecific Antibodies By Octet.

Bispecific Antibody	Response	KD (M)	kon(1/Ms)	kdis(1/s)	Full R^2
CD3xCD33-BspAb36	0.42	2.05E-07	1.63E+04	3.34E-03	1.00
CD3xCD33-BspAb38	0.28	8.10E-08	2.50E+05	2.03E-02	0.98
CD3xCD33-BspAb39	0.10	2.99E-07	3.91E+05	1.17E-01	0.96

CD3xCD33-BspAb42	0.51	1.33E-07	1.39E+05	1.86E-02	1.00
CD3xCD33-BspAb44	0.56	4.85E-09	3.27E+05	1.59E-03	0.99
CD3xCD33-BspAb45	0.58	1.77E-07	2.99E+05	5.29E-02	1.00
CD3xCD33-BspAb51	0.26	7.40E-08	3.14E+04	2.32E-03	0.98
CD3xCD33-BspAb37	0.34	2.13E-07	1.58E+04	3.36E-03	1.00
CD3xCD33-BspAb48	0.23	6.14E-08	3.51E+04	2.16E-03	0.98
CD3xCD33-BspAb50	0.33	1.25E-07	2.10E+04	2.62E-03	0.99
CD3xCD33-BspAb52	0.07	1.95E-08	3.86E+05	7.51E-03	0.97
CD3xCD33-BspAb61	0.74	7.62E-09	2.45E+05	1.87E-03	0.99
CD3xCD33-BspAb62	0.25	8.59E-08	5.52E+05	4.74E-02	0.95
CD3xCD33-BspAb65	0.09	1.17E-08	1.14E+05	1.34E-03	0.95
CD3xCD33-BspAb66	0.03	8.54E-10	1.25E+04	1.07E-05	0.00
High affinity Control	0.73	2.01E-08	3.25E+05	6.52E-03	0.99
Low affinity Control	0.30	5.03E-08	2.41E+05	1.21E-02	0.93

[00296] A panel of bispecific antibodies was selected for further characterization in additional assays to assess their functionality and toxicity. Killing Immune-Lysis Reaction (KILR) T Cell Redirection (TCR) assay (DiscoverX KILR HL-60 TCR Cytotoxic Assay) evaluated the ability of the bispecific anti-CD3 antibodies to mediate an interaction between effector (human Pan-T or PBMC) and target (CD33) expressing cells resulting in the release of reporter element as well as in cellular toxicity (**Figure 3A and Figure 3B**, **Table 10**, *infra*).

[00297] To generate a panel of bispecific anti-CD3 antibodies with good cytotoxic capacity yet minimal cytokine induction, we tested the supernatants of the effector human Pan-T or PBMC cells in quantitative ELISA against IL2 and IFNy (**Figure 4A and Figure 4B**, **Table 10**, *infra*).

Table 10. RTCC Assay and Cytokine Release

Bispecific Antibody	**RTCC**		**IFNg**	**IL2**
	EC_{50} (nM)	**R^2**	**1 to 4**	**1 to 45**
CD3xCD33-BspAb36	0.06	0.9	1374	40
CD3xCD33-BspAb38	9.29	1.0	44	56

CD3xCD33-BspAb39	ND	0.9	17	53
CD3xCD33-BspAb42	0.17	1.0	284	110
CD3xCD33-BspAb44	0.05	1.0	337	106
CD3xCD33-BspAb45	0.22	1.0	821	76
CD3xCD33-BspAb51	0.20	0.9	3341	170
CD3xCD33-BspAb37	0.12	0.9	604	76
CD3xCD33-BspAb48	1.50	0.9	97	33
CD3xCD33-BspAb50	0.28	1.0	1991	63
CD3xCD33-BspAb52	17.81	1.0	94	53
CD3xCD33-BspAb61	0.01	1.0	12301	216
CD3xCD33-BspAb62	0.24	1.0	1161	120
CD3xCD33-BspAb65	ND	0.9	21	46
CD3xCD33-BspAb66	25.45	1.0	2261	86
High affinity Control	0.03	0.97	59376	843
Low affinity Control	1.48	0.92	26748	33

Binding Assays Performed Using Bispecific Antibodies

[00298] A panel of bispecific antibodies was assessed for binding specificity by flow cytometry using Jurkat WT versus Jurkat TCRb knockout cells, Pan-T cells, and CD33 expressing cells using Goat anti-human IgG Fc (Jackson ImmunoReasearch Labs, Inc., West Grove, PA, cat# 109-605-098) (**Table 11**, *infra*). In addition, a subset of bispecific antibodies was tested for binding to recombinant CD3 proteins by Octet (**Table 12**, *infra*).

Table 11. Binding of Bispecific Antibodies by Flow Cytometry.

BiSAb ID:	Pan-T (gMFI), 10ug/mL	Pan-T (% Positive, 10ug/mL	Pan-T (gMFI), 1ug/mL	Pan-T (% Positive, 1ug/mL	Jurkat WT (gMFI), 10ug/mL	Jurkat WT (gMFI), 1ug/mL	Jurkat KO (gMFI), 10ug/mL	Jurkat KO (gMFI), 1ug/mL	Jurkat WT/KO (Fold), 10ug/mL	Jurkat WT/KO (Fold), 1ug/mL
CD3xCD33-BspAb67	673309	99.9	450196	99.8	66711	57105	4498	4034	14.8	14.2
CD3xCD33-BspAb68	600836	99.9	539367	100.0	63582	58008	4675	4500	13.6	12.9
CD3xCD33-BspAb69	281479	99.8	95339	99.7	25791	16481	2951	2602	8.7	6.3
CD3xCD33-BspAb70	141859	99.6	33142	99.2	17127	7272	2791	2274	6.1	3.2
CD3xCD33-BspAb71	7092	50.1	2329	1.7	2899	1671	1711	1814	1.7	0.9
CD3xCD33-BspAb72	8345	66.1	2427	2.0	3760	1951	1903	1926	2.0	1.0
CD3xCD33-BspAb73	22007	95.9	4182	17.3	6106	2509	2049	2106	3.0	1.2
CD3xCD33-BspAb74	25973	99.0	4348	16.4	7991	2766	2208	2191	3.6	1.3
CD3xCD33-BspAb75	148910	99.7	69762	99.2	15894	11261	2215	2114	7.2	5.3
CD3xCD33-BspAb76	43375	99.5	6793	50.2	9785	3178	2214	2079	4.4	1.5
CD3xCD33-BspAb77	188288	99.8	37766	92.5	22070	8960	2579	2464	8.6	3.6
CD3xCD33-BspAb78	224766	99.8	66458	98.0	28845	20346	2924	3085	9.9	6.6
CD3xCD33-BspAb79	166057	99.4	34696	99.3	20380	8833	2299	2225	8.9	4.0
CD3xCD33-BspAb80	485569	99.8	330002	99.7	59433	50541	3965	3861	15.0	13.1
CD3xCD33-BspAb81	368580	99.8	79909	99.7	55069	24138	4067	3402	13.5	7.1
CD3xCD33-BspAb82	462151	99.9	318963	99.5	58591	54545	4060	4228	14.4	12.9
CD3xCD33-BspAb83	597540	99.8	566077	99.8	69086	67667	4832	4820	14.3	14.0
CD3xCD33-BspAb84	362037	99.9	173191	99.9	50957	35248	3678	3250	13.9	10.8
CD3xCD33-BspAb85	249316	99.7	95995	99.4	31972	18920	3237	3061	9.9	6.2
CD3xCD33-BspAb86	25415	92.4	5409	35.2	9551	3175	2450	2289	3.9	1.4
CD3xCD33-BspAb87	3118	4.8	1979	1.6	2177	1607	1718	1909	1.3	0.8
CD3xCD33-BspAb88	2056	1.5	2098	1.8	1801	1698	1860	2102	1.0	0.8
CD3xCD33-BspAb89	1960	1.7	1832	0.6	1751	1843	1896	2237	0.9	0.8

CD3xCD33-BspAb90	78440	98.1	11621	83.8	19388	4480	2574	2368	7.5	1.9
CD3xCD33-BspAb91	127228	99.4	18485	94.6	31551	8109	3025	2206	10.4	3.7
CD3xCD33-BspAb92	94733	99.8	12057	86.5	24788	4957	3037	2291	8.2	2.2
CD3xCD33-BspAb93	135405	99.8	29610	98.2	28421	16200	2981	2901	9.5	5.6
CD3xCD33-BspAb94	2599	4.4	2054	2.6	2189	1833	2021	2198	1.1	0.8
CD3xCD33-BspAb95	232496	99.8	111514	99.7	39483	33943	3148	3243	12.5	10.5
CD3xCD33-BspAb96	17933	95.8	3695	8.2	7474	2369	2154	2078	3.5	1.1
CD3xCD33-BspAb97	53016	98.5	9272	66.3	8453	3893	2259	2331	3.7	1.7
CD3xCD33-BspAb98	277636	99.6	196583	99.8	47686	43454	3759	3869	12.7	11.2
CD3xCD33-BspAb99	1830	1.5	1807	1.2	1670	1658	1719	1771	1.0	0.9
CD3xCD33-BspAb100	347595	99.5	239825	99.5	39559	29953	3329	3211	11.9	9.3
CD3xCD33-BspAb101	2146	1.6	1909	1.8	1942	1776	2072	2286	0.9	0.8
CD3xCD33-BspAb102	2189	1.1	1990	1.1	2083	1854	1968	2281	1.1	0.8
CD3xCD33-BspAb103	2022	1.4	1886	1.8	1671	1612	1980	1896	0.8	0.9
CD3xCD33-BspAb104	2089	1.6	2023	1.2	1789	1705	1854	2138	1.0	0.8
CD3xCD33-BspAb105	10100	69.8	2770	4.4	3883	2185	2164	2340	1.8	0.9
CD3xCD33-BspAb106	1960	2.0	2001	1.2	1904	1841	2263	2285	0.8	0.8
CD3xCD33-BspAb107	1834	1.5	1848	1.6	1604	1688	1809	1841	0.9	0.9
CD3xCD33-BspAb108	1961	1.1	2011	1.0	1660	1701	1906	2037	0.9	0.8
CD3xCD33-BspAb109	1936	1.5	1868	1.7	1933	1776	2261	2236	0.9	0.8
CD3xCD33-BspAb110	8491	55.1	2855	8.3	4151	2361	2256	2272	1.8	1.0
CD3xCD33-BspAb111	68890	99.2	23079	92.3	10630	7100	2219	2176	4.8	3.3
CD3xCD33-BspAb112	23571	91.4	5265	32.6	6152	3022	2190	2161	2.8	1.4
CD3xCD33-BspAb113	110675	99.5	24919	96.2	16049	10093	2704	2570	5.9	3.9
CD3xCD33-BspAb114	5987	39.9	2576	2.6	3212	2108	2169	2136	1.5	1.0
CD3xCD33-BspAb115	34205	95.5	8663	63.4	12577	7379	2215	2064	5.7	3.6
CD3xCD33-BspAb116	29960	98.2	5262	31.6	9604	3317	2319	2085	4.1	1.6
CD3xCD33-BspAb117	194524	99.7	70309	99.6	38621	29655	3657	3410	10.6	8.7

CD3xCD33-BspAb118	370298	99.8	330690	99.3	64960	56289	4698	4562	13.8	12.3
CD3xCD33-BspAb119	166195	99.7	88220	99.8	25658	22416	2836	2860	9.0	7.8
CD3xCD33-BspAb120	87708	99.3	27621	95.2	14596	8733	2380	2348	6.1	3.7
CD3xCD33-BspAb121	1918	1.5	1921	1.5	2043	1924	2020	2301	1.0	0.8
CD3xCD33-BspAb122	2024	1.0	2077	1.9	1980	1910	2001	2269	1.0	0.8
CD3xCD33-BspAb123	1915	1.4	1863	1.8	1706	1675	2115	1920	0.8	0.9
CD3xCD33-BspAb124	1967	1.0	1946	1.5	1792	1799	1962	1984	0.9	0.9
CD3xCD33-BspAb125	28659	95.4	6023	42.2	13694	3683	2607	2382	5.3	1.5
CD3xCD33-BspAb126	161104	99.7	55991	98.3	26033	15687	2973	2954	8.8	5.3
CD3εδ -specific monovalent control antibody	3237	9.9	1979	0.8	2183	1703	1830	1914	1.2	0.9
CD3εδ -specific bivalent control antibody	147432	98.4	86064	97.2	13977	10936	2322	2411	6.0	4.5
No Ab	1852	0.7	1667	1.3	1892	1924	2011	2206	0.9	0.9
No Ab	2006	1.0	1846	0.7	1820	1965	1970	2224	0.9	0.9
CD3xCD33-BspAb44	507822	99.5	474542	99.5	54168	57504	4183	4399	12.9	13.1
CD3xCD33-BspAb48	12235	82.2	2867	3.4	5169	2260	2045	2025	2.5	1.1
High affinity Control	177899	99.4	66401	99.4	21587	15533	4183	3930	5.2	4.0
Low affinity Control	3406	7.9	2069	1.5	2094	1919	2002	2165	1.0	0.9
Gemtuzumab	1677	0.7	1771	1.2	1688	1654	1834	1856	0.9	0.9
hIgG1	1783	0.8	1863	0.8	1742	1774	1862	2024	0.9	0.9
OKT3	394453	99.9	602598	99.6	45189	54040	4071	4900	11.1	11.0
FACS Buffer	2061	1.1	1977	1.3	1858	1866	1950	2228	1.0	0.8

Table 12. Binding of Bispecific Antibodies By Octet.

BiSAb ID	Response (800nM)	KD (M)	kon(1/Ms)	kdis(1/s)	Full R^2
CD3xCD33-BspAb67	0.42	5.57E-09	4.21E+05	2.34E-03	0.9882
CD3xCD33-BspAb68	0.70	7.09E-09	4.00E+05	2.83E-03	0.9727
CD3xCD33-BspAb69	0.25	4.01E-07	3.47E+05	1.39E-01	0.9948
CD3xCD33-BspAb70	0.10	9.11E-09	6.09E+05	5.54E-03	0.8253
CD3xCD33-BspAb71	0.09	2.46E-06	8.13E+04	2.00E-01	0.9728
CD3xCD33-BspAb72	0.04	8.27E-09	2.15E+05	1.78E-03	0.9244
CD3xCD33-BspAb73	0.14	4.88E-07	5.01E+05	2.44E-01	0.9848
CD3xCD33-BspAb74	0.00	<1.0E-12	1.25E+04	<1.0E-07	0
CD3xCD33-BspAb75	0.17	2.59E-07	2.77E+05	7.19E-02	0.9371
CD3xCD33-BspAb76	0.30	2.25E-07	3.28E+05	7.37E-02	0.9928
CD3xCD33-BspAb77	0.25	6.09E-07	3.63E+05	2.21E-01	0.9973
CD3xCD33-BspAb78	0.39	1.17E-07	3.01E+05	3.52E-02	0.9946
CD3xCD33-BspAb79	0.35	4.56E-07	1.82E+05	8.29E-02	0.997
CD3xCD33-BspAb80	0.44	6.06E-09	3.08E+05	1.86E-03	0.9905
CD3xCD33-BspAb81	0.35	6.94E-08	1.14E+05	7.91E-03	0.9881
CD3xCD33-BspAb82	0.44	1.87E-08	2.87E+05	5.36E-03	0.987
CD3xCD33-BspAb83	0.55	3.28E-09	4.08E+05	1.34E-03	0.9778
CD3xCD33-BspAb84	0.52	2.46E-08	2.73E+05	6.71E-03	0.9897
CD3xCD33-BspAb85	0.57	6.08E-08	2.46E+05	1.49E-02	0.9829
CD3xCD33-BspAb86	0.03	5.42E-08	2.76E+05	1.49E-02	0.9599
CD3xCD33-BspAb87	0.01	5.17E-09	5.94E+05	3.07E-03	0.5677
CD3xCD33-BspAb88	0.29	1.26E-08	6.18E+04	7.78E-04	0.9688
CD3xCD33-BspAb89	0.01	2.44E-08	2.37E+06	5.78E-02	0.8423
CD3xCD33-BspAb90	0.22	3.34E-07	1.38E+04	4.59E-03	0.9968
CD3xCD33-BspAb91	0.37	6.38E-08	3.19E+04	2.03E-03	0.998
CD3xCD33-BspAb92	0.33	4.38E-08	1.16E+04	5.10E-04	0.9986
CD3xCD33-BspAb93	0.49	1.48E-08	3.49E+05	5.16E-03	0.9872
CD3xCD33-BspAb94	0.18	6.45E-07	1.15E+05	7.38E-02	0.9966
CD3xCD33-BspAb95	0.49	8.44E-09	5.42E+05	4.57E-03	0.966
CD3xCD33-BspAb96	0.11	5.73E-07	3.66E+05	2.10E-01	0.9823
CD3xCD33-BspAb97	0.32	2.76E-07	3.09E+05	8.54E-02	0.9991
CD3xCD33-BspAb98	0.45	5.10E-09	6.53E+05	3.33E-03	0.9554
CD3xCD33-BspAb99	0.01*	3.07E-08	1.37E+05	4.21E-03	0.603*
CD3xCD33-BspAb100	0.30	2.35E-07	3.54E+05	8.31E-02	0.974
CD3xCD33-BspAb101	0.02*	3.40E-09	8.07E+05	2.75E-03	0.871*
CD3xCD33-BspAb102	0.27	1.17E-07	4.59E+03	5.37E-04	1.000

CD3xCD33-BspAb103	0.43	3.52E-08	1.52E+04	5.37E-04	0.999
CD3xCD33-BspAb104	0.06	2.30E-08	1.25E+05	2.87E-03	0.872*
CD3xCD33-BspAb105	0.22	5.17E-07	3.56E+05	1.84E-01	0.997
CD3xCD33-BspAb106	0.16	4.01E-07	4.68E+05	1.87E-01	0.944
CD3xCD33-BspAb107	0.04*	1.05E-08	3.80E+05	4.00E-03	0.713*
CD3xCD33-BspAb108	0.01*	1.40E-06	2.94E+03	4.12E-03	0.391*
CD3xCD33-BspAb109	0.01*	1.32E-10	1.25E+04	1.65E-06	0.000*
CD3xCD33-BspAb110	0.16	3.91E-07	3.95E+05	1.54E-01	0.968
CD3xCD33-BspAb111	0.29	2.93E-07	3.34E+05	9.79E-02	0.993
CD3xCD33-BspAb112	0.16	8.81E-07	3.79E+05	3.34E-01	0.996
CD3xCD33-BspAb113	0.35	2.25E-07	2.51E+05	5.64E-02	0.998
CD3xCD33-BspAb114	0.31	3.59E-07	3.25E+05	1.17E-01	0.996
CD3xCD33-BspAb115	0.55	1.62E-08	2.49E+05	4.02E-03	0.990
CD3xCD33-BspAb116	0.33	1.63E-07	1.03E+05	1.68E-02	0.997
CD3xCD33-BspAb117	0.42	1.66E-08	3.35E+05	5.54E-03	0.984
CD3xCD33-BspAb118	0.57	1.91E-09	4.03E+05	7.67E-04	0.989
CD3xCD33-BspAb119	0.48	2.17E-08	3.17E+05	6.88E-03	0.986
CD3xCD33-BspAb120	0.45	6.90E-08	2.74E+05	1.89E-02	0.985
CD3xCD33-BspAb121	0.01*	1.21E-06	1.79E+04	2.16E-02	0.814*
CD3xCD33-BspAb122	0.01*	<1.0E-12	1.54E+04	<1.0E-07	0.557*
CD3xCD33-BspAb123	0.22	1.20E-08	8.55E+04	1.03E-03	0.951
CD3xCD33-BspAb124	0.00*	<1.0E-12	1.25E+04	<1.0E-07	0.000*
CD3xCD33-BspAb125	0.30	3.19E-07	1.18E+04	3.75E-03	0.999
CD3xCD33-BspAb126	0.54	7.84E-08	1.49E+05	1.17E-02	0.995
CD3εδ -specific monovalent control antibody	0.04*	2.30E-08	4.43E+05	1.02E-02	0.910
CD3εδ -specific bivalent control antibody	0.05	8.54E-10	1.25E+04	1.07E-05	0.000*
CD3εδ -specific monovalent control antibody	0.02*	5.07E-09	1.20E+06	6.09E-03	0.8167*
CD3εδ -specific bivalent control antibody	0.05	2.71E-07	1.58E+05	4.30E-02	0.9152
CD3xCD33-BspAb44	0.54	4.15E-09	3.49E+05	1.45E-03	0.987
CD3xCD33-BspAb48	0.09	1.38E-07	1.85E+04	2.55E-03	0.992
High affinity Control	0.23	4.49E-08	2.48E+05	1.11E-02	0.995
Low affinity Control	0.05	4.38E-09	1.25E+04	5.48E-05	0.000*
High affinity Control	0.23	3.95E-08	2.59E+05	1.02E-02	0.9943
Low affinity Control	0.04*	4.27E-09	1.25E+04	5.33E-05	0*
	* low value				* low value

EXAMPLE 5

TESTING THE EFFICACY OF BISPECIFIC IN HUMAN PERIPHERAL BLOOD MONONUCLEAR CELLS (PBMCS)

[00299] A panel of bispecific antibodies was selected for further characterization in additional assays to assess their functionality and toxicity. Killing Immune-Lysis Reaction (KILR) T Cell Redirection (TCR) assay (DiscoverX KILR HL-60 TCR Cytotoxic Assay) evaluated the ability of the bispecific anti-CD3 antibodies to mediate an interaction between effector (human Pan-T or donor PBMC) and target (CD33) expressing cells resulting in the release of reporter element as well as in cellular toxicity (See **Figures 5A-5D**, **Table 13**, *infra*).

[00300] To generate a panel of bispecific anti-CD3 antibodies with good cytotoxic capacity yet minimal cytokine induction, we tested the supernatants of the effector human Pan T or PBMC cells in quantitative flow cytometry assay (LEGENDplexTM, Biolegend, Cat: 741036) against IL2 (**Table 14**, *infra*), TNFα (**Table 15**, *infra*), and IFNγ (**Table 16**, *infra*),

Table 13. RTCC Assay

BiSAb ID	Donor 1			Donor 2			Donor 3			Donor 0		
	EC50 (nM)	gMFI max	R^2	EC50 (nM)	gMFI max	R^2	EC50 (nM)	gMFI max	R^2	EC50 (nM)	gMFI max	R^2
CD3xCD33-BspAb71	0.027	63010	0.98	0.083	57492	0.99	0.377	78563	1.00	0.479	23856	0.97
CD3xCD33-BspAb116	0.045	65975	0.93	0.121	52850	0.98	0.171	65799	0.98	0.126	24526	0.99
CD3xCD33-BspAb37	0.010	70563	0.98	0.042	59221	0.97	0.053	82310	0.95	0.172	31557	1.00
CD3xCD33-BspAb38	0.413	64778	1.00	0.717	50523	1.00	1.723	75839	1.00	1.488	23336	0.93
CD3xCD33-BspAb45	0.004	76051	0.97	0.012	55929	0.97	0.020	86741	0.99	0.030	23283	0.97
CD3xCD33-BspAb51	0.036	66855	0.97	0.050	55830	0.97	0.085	80586	0.97	0.200	28440	0.98
CD3xCD33-BspAb52	0.762	57768	0.98	2.281	37739	0.99	7.832	42697	1.00	5.208	16216	0.99
CD3xCD33-BspAb66	0.937	65809	0.98	1.846	53919	0.99	2.333	75941	0.96	2.916	29714	0.99
CD3xCD33-BspAb73	0.035	79871	0.97	0.089	56118	0.99	0.159	73957	0.99	0.086	15614	0.99
CD3xCD33-BspAb72	0.819	78068	0.99	2.430	54095	1.00	4.903	66216	1.00	5.363	21018	1.00
CD3xCD33-BspAb85	0.006	78176	0.97	0.028	64222	0.98	0.045	85566	0.95	0.102	29905	1.00
CD3xCD33-BspAb86	0.151	67276	0.98	0.697	59133	1.00	1.578	83470	0.95	1.707	24060	0.99
CD3xCD33-BspAb90	0.012	76918	0.98	0.034	62305	0.94	0.047	83956	0.98	0.147	34770	1.00
CD3xCD33-BspAb94	2.253	61742	0.99	1.357	24867	0.99	0.945	29374	0.96	1.325	15399	0.99
CD3xCD33-BspAb105	0.153	62652	0.97	0.507	26713	0.98	0.821	35049	0.99	0.478	10774	0.95
CD3xCD33-BspAb115	0.006	63020	0.95	0.009	51930	0.96	0.011	82682	0.98	0.054	38738	1.00
CD3xCD33-BspAb125	0.027	65480	0.98	0.049	54558	0.96	0.055	84180	0.96	0.166	26717	0.99
High affinity Control	0.040	81658	0.99	0.039	82922	0.98	0.031	87241	0.98	0.908	75062	0.91
low affinity Control	5.021	122021	0.99	6.677	82075	0.96	0.299	104125	0.97	23.710	59726	0.99
hIgG1 Synagis_Sp34Hi	2.773	71986	0.97	44.520	30241	1.00	46.210	44073	0.99	ND	11360	1.00
hIgG1 Synagis_Sp34Lo	~9168005365107	31677	0.94	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gemtuzumab	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 14. Cytokine Release Assay (IFNγ)

BiSAb ID	Donor 1			Donor 2			Donor 3			Donor 0		
	EC50 (nM)	gMFI max	R^2	EC50 (nM)	gMFI max	R^2	EC50 (nM)	gMFI max	R^2	EC50 (nM)	gMFI max	R^2
CD3xCD33-BspAb71	ND	5378	ND	1.91	27703	1.00	~3712503736223	331871	1.00	ND	812403	ND
CD3xCD33-BspAb116	ND	5443	ND	0.1771	14072	0.95	1.511	166770	0.99	ND	186959	ND
CD3xCD33-BspAb37	ND	5562	ND	0.1402	32861	0.99	1.763	316530	1.00	0.252	1056106	1.00
CD3xCD33-BspAb38	ND	4321	ND	13.36	17985	1.00	6.382	98493	0.99	8.377	555498	0.99
CD3xCD33-BspAb45	ND	4634	ND	0.06837	26909	0.91	ND	289748	ND	0.09598	1388924	0.93
CD3xCD33-BspAb51	15.26	10833	0.99	0.2923	30586	0.99	0.214	355475	0.91	0.2693	1340451	0.94
CD3xCD33-BspAb52	ND	4225	ND	ND	4666	ND	25.37	8065	0.98	ND	6346	ND
CD3xCD33-BspAb66	ND	7652	0.96	22.89	28273	1.00	52.59	378966	1.00	12.88	1250982	1.00
CD3xCD33-BspAb73	ND	4347	ND	8.614	26901	0.99	4.637	197820	0.99	ND	308014	ND
CD3xCD33-BspAb72	ND	4821	ND	49.06	12175	0.99	ND	82790	ND	ND	465449	ND
CD3xCD33-BspAb85	ND	8042	ND	0.04678	31370	0.92	ND	104416	ND	0.08319	983149	0.97
CD3xCD33-BspAb86	ND	4691	ND	2.678	18489	0.99	7.929	152316	0.99	2.346	573346	0.89
CD3xCD33-BspAb90	ND	10814	ND	0.1262	31640	0.97	0.0851	512855	0.89	0.1913	1705521	0.96
CD3xCD33-BspAb94	ND	4553	ND	ND	4655	ND	ND	4151	ND	ND	4667	ND
CD3xCD33-BspAb105	ND	4562	ND	ND	5334	ND	ND	5115	ND	ND	11319	ND
CD3xCD33-BspAb115	0.1911	45118	0.99	0.03964	66767	0.86	0.04025	475087	0.89	0.04182	1599339	0.88
CD3xCD33-BspAb125	ND	4936	ND	0.1028	16190	0.99	0.06305	169586	0.94	~ 12.29	957996	1.00
High affinity Control	6.993	911706	1.00	2.164	1413786	0.93	0.1256	1678765	0.96	0.04496	2816615	0.97
Low affinity Control	14.36	129186	1.00	16.41	712053	1.00	11.43	1084219	1.00	0.3081	2922778	0.98
hIgG1 Synagis_Sp34Hi	ND	4789	ND	77.7	62571	1.00	ND	35105	ND	ND	148048	ND
hIgG1 Synagis_Sp34Lo	ND	4636	ND	ND	5613	ND	ND	4070	ND	ND	4606	ND
Gemtuzumab	ND	4629	ND	ND	3585	ND	ND	4481	ND	ND	5339	ND

Table 15. Cytokine Release Assay (TNFα)

BiSAb ID	Donor 1			Donor 2			Donor 3			Donor 0		
	EC50 (nM)	gMFI max	R^2	EC50 (nM)	gMFI max	R^2	EC50 (nM)	gMFI max	R^2	EC50 (nM)	gMFI max	R^2
CD3xCD33-BspAb71	ND	5473	ND	0.3958	16716	ND	ND	28222	ND	ND	44063	ND
CD3xCD33-BspAb116	ND	4927	ND	0.1547	9078	0.94	0.6849	13575	0.94	0.6098	17966	0.98
CD3xCD33-BspAb37	ND	5608	ND	0.08322	15827	0.99	0.2221	31631	1.00	0.1645	48344	0.99
CD3xCD33-BspAb38	ND	4836	ND	4.029	10061	0.99	5.948	17928	0.99	6.014	28500	0.99
CD3xCD33-BspAb45	ND	4854	ND	0.03339	12115	0.89	0.02163	31777	0.88	0.09192	71341	0.97
CD3xCD33-BspAb51	0.5349	6203	0.90	0.1804	14790	0.96	0.1664	36152	0.94	0.2028	51709	0.95
CD3xCD33-BspAb52	ND	4512	ND	1.347	4796	0.84	18.65	5311	0.90	ND	5506	ND
CD3xCD33-BspAb66	ND	5358	ND	28.13	13976	0.99	10.8	28579	0.99	20.09	55773	1.00
CD3xCD33-BspAb73	ND	4395	ND	1.012	14288	0.98	0.6526	24220	0.99	0.7594	28038	0.89
CD3xCD33-BspAb72	ND	4412	ND	16.91	8012	0.99	42.55	11154	1.00	ND	23361	1.00
CD3xCD33-BspAb85	0.6467	5487	0.88	0.04972	18397	0.95	0.06351	26600	0.94	0.114	44799	0.98
CD3xCD33-BspAb86	ND	4900	ND	2.189	10882	0.98	5.578	25170	0.99	2.153	34071	0.87
CD3xCD33-BspAb90	ND	5326	ND	0.07882	15969	0.99	0.07242	32823	0.97	0.136	61677	0.95
CD3xCD33-BspAb94	ND	4672	ND	ND	4423	ND	ND	4108	ND	ND	5151	ND
CD3xCD33-BspAb105	ND	4473	ND	ND	5503	ND	ND	4391	ND	ND	5208	ND
CD3xCD33-BspAb115	0.05533	12972	0.95	0.04515	24092	0.91	0.04599	48556	0.96	0.08144	91597	0.98
CD3xCD33-BspAb125	ND	5098	ND	0.054	11970	0.96	0.04462	17759	0.88	0.4753	39618	1.00
High affinity Control	13.14	113158	1.00	5.976	124569	0.92	0.212	129075	0.96	0.4592	231030	0.99
Low affinity Control	ND	82783	ND	24.56	134766	1.00	40.69	122386	1.00	0.5495	222368	0.95
hIgG1 Synagis_Sp34Hi	ND	4912	ND	26.04	21673	1.00	ND	6853	ND	ND	18150	0.98
hIgG1 Synagis_Sp34Lo	ND	4642	ND	28.82	5718	0.95	ND	3726	ND	ND	4772	ND
Gemtuzumab	ND	4426	ND	ND	3679	ND	ND	3960	ND	ND	5312	ND

Table 16. Cytokine Release Assay (IL2)

BiSAb ID	Donor 1			Donor 2			Donor 3			Donor 0		
	EC50 (nM)	gMFI max	R^2	EC50 (nM)	gMFI max	R^2	EC50 (nM)	gMFI max	R^2	EC50 (nM)	gMFI max	R^2
CD3xCD33-BspAb71	ND	24419	0.99	0.07245	30872	0.99	2.16	126591	1.00	3.03	65465	1.00
CD3xCD33-BspAb116	0.3841	18977	0.98	0.09089	16763	0.86	0.198	27240	0.93	0.4501	23226	0.99
CD3xCD33-BspAb37	0.4372	26794	1	0.1408	34788	0.98	0.1809	104035	1.00	0.18	69244	0.99
CD3xCD33-BspAb38	2.869	16171	0.94	1.73	19186	0.99	1.838	45880	1.00	6.626	39254	0.99
CD3xCD33-BspAb45	0.08694	22155	0.97	0.02039	26215	0.96	0.02047	67854	0.95	0.05395	50916	0.87
CD3xCD33-BspAb51	0.529	37819	0.97	0.2052	27287	0.94	0.09949	155832	0.90	0.1808	104557	0.97
CD3xCD33-BspAb52	10.71	14497	0.92	ND	12791	ND	3.865	18063	0.94	140.7	17174	0.93
CD3xCD33-BspAb66	40.1	31148	1	38.74	33694	1.00	49.75	94973	1.00	44.86	84690	1.00
CD3xCD33-BspAb73	0.3728	15943	ND	26.46	32508	0.96	0.2396	42921	0.98	0.104	28977	0.95
CD3xCD33-BspAb72	4.284	17331	0.98	2.157	16394	0.93	8.355	26269	1.00	8.213	22977	0.99
CD3xCD33-BspAb85	0.4415	23141	0.99	0.2215	32629	0.99	0.09259	49715	0.99	0.1208	32986	0.98
CD3xCD33-BspAb86	4.237	18817	0.97	6.459	22130	0.98	3.523	42106	1.00	4.13	34392	0.98
CD3xCD33-BspAb90	0.08322	24330	0.91	0.06124	30007	0.98	ND	79297	0.81	0.08872	69647	0.97
CD3xCD33-BspAb94	3.58	14811	0.96	ND	12479	ND	1.472	13878	0.93	ND	13559	ND
CD3xCD33-BspAb105	0.2316	13384	0.09	ND	15857	ND	0.1407	17955	0.91	0.4544	16915	0.94
CD3xCD33-BspAb115	0.07554	99289	0.97	0.08065	45235	0.97	0.04793	300436	0.96	0.2056	242139	1.00
CD3xCD33-BspAb125	0.1017	22318	0.98	0.1151	25090	0.96	ND	65843	ND	0.1055	52780	0.99
High affinity Control	1.639	179041	0.99	16.66	121009	0.96	0.1715	346977	0.99	0.4559	376528	0.98
Low affinity Control	10.76	18465	0.99	ND	15713	ND	2.921	21164	0.95	2.286	24343	0.98
hIgG1 Synagis_Sp34Hi	ND	15385	0.92	29.77	81190	1.00	22.8	25490	0.99	ND	39677	1.00
hIgG1 Synagis_Sp34Lo	ND	12643	ND	ND	16145	0.94	ND	14041	ND	0.6993	12980	ND
Gemtuzumab	ND	12947	ND	ND	10696	ND	ND	12203	ND	5.36	12483	ND

EXAMPLE 6

CHARACTERIZATION OF FAVORABLE BIOPHYSICAL CHARACTERISTICS

T_m/T_{agg} analysis

[00301] Samples were loaded in duplicate into 9 μL wells called a Uni on an UNCLE instrument (Unchained Labs) and thermal data were analyzed by the Uncle instrument software. The following parameters were obtained: (1) starting temperature of first melt (T_{onset}), (2) melting temperature transitions (T_M), and (3) aggregation temperature transitions at two different wavelengths (T_{agg}). Full spectrum intrinsic fluorescence was used to obtain T_m and T_{onset} while static light scattering was used to obtain T_{agg}.

[00302] Polyspecific Reagent/nonspecific binding (PSR/NSB) ELISA PSR/NSB ELISA was employed to measure polyspecific/nonspecific antibody binding to various antigens: ds DNA (D4544, Sigma) and ss DNA (D8899 Sigma), cardiolipin (C0563, Sigma) , insulin (l9278, Sigma), lipopolysaccharide (LPS; tlrl-eblps, InvivoGen), and Hemocyanin (H8283, Sigma). The wells were coated with a mixture of the antigens, and the plate was then blocked with 1% BSA. Wells were washed after every step, test antibodies and controls were added followed by a secondary HRP-conjugated Goat anti-human IgG Fc (Jackson ImmunoReasearch Labs, Inc., West Grove, PA). The plate was developed with TMB and read on a plate reader with the setting at OD650. Results are described in Figure 6A and Table 17.

Baculovirus particles (BVP) ELISA

[00303] BVP ELISA was used to measure nonspecific/polyspecific antibody binding to Baculovirus Particles (BVP). The plate was coated with BVP antigen (E3001 Medna), and the plate was blocked with 1% BSA, washes followed every step, test antibodies and controls were added followed by a secondary HRP-conjugated Goat anti-human IgG Fc (Jackson ImmunoReasearch Labs, Inc., West Grove, PA). The plate was developed with TMB and read on a plate reader with the setting at OD_{650}. Results are described in Figure 6B and Table 17.

Hydrophobic interaction chromatography (HIC) Analysis

[00304] Each bispecific Ab was diluted with HN_4SO_4 to final concentration of 1 M HN_4SO_4, and 10ug was injected into HPLC. The antibody species were then eluted using a reverse NaCl gradient (high concentration to low concentration). The retention time of the antibody was measured on a HIC-butyl column (Proteomix HIC Butyl-NP5) with less hydrophobic species eluting earlier and more hydrophobic species eluting later. Results are described in Figure 6C and Table 17.

Table 17. Developability assessments of CD3 Bispecific molecules

Sample ID	Average Tonset (°C)	Average Tm1 (°C)	Average Tm2 (°C)	Average Tagg 266 (°C)	Average Tagg 473 (°C)	HIC Elution Time (min)	BVP ELISA (OD)	PSR ELISA (OD)
CD3xCD33-BspAb68	45.5	51.1	ND	72.9	73.2	16.12	0.08	0.06
CD3xCD33-BspAb71	50.7	56.4	ND	73.1	73.4	16.09	0.07	0.06
CD3xCD33-BspAb72	55.8	62.1	72.2	75.1	75.6	16.15	0.1	0.06
CD3xCD33-BspAb73	42.5	54.1	72.3	74.4	75	16.02	0.08	0.05
CD3xCD33-BspAb77	50.3	54.7	ND	73.4	73.9	16.41	0.07	0.06
CD3xCD33-BspAb78	52.6	57.8	72	73.9	74.2	16.11	0.07	0.06
CD3xCD33-BspAb79	48.8	52.7	66.5	74.1	74.3	16.12	0.07	0.06
CD3xCD33-BspAb80	49.3	56.4	ND	75	75.4	16.09	0.06	0.05
CD3xCD33-BspAb81	51.7	58.3	ND	74.2	74.3	16.14	0.07	0.06
CD3xCD33-BspAb84	55.7	60.6	71.5	74.2	74.4	16.05	0.06	0.06
CD3xCD33-BspAb85	54.1	59.9	ND	73.8	74.2	16.25	0.06	0.06
CD3xCD33-BspAb86	52.1	59.1	ND	73.9	74.2	19.12	0.08	0.06
CD3xCD33-BspAb90	56.9	62.5	71.2	74	74.4	16.03	0.08	0.06
CD3xCD33-BspAb91	47.9	58.1	72	73.9	74.1	16.78	0.07	0.05
CD3xCD33-BspAb92	51.7	59.1	72.2	74.1	74.3	ND	0.06	0.05
CD3xCD33-BspAb93	42.7	48.3	65.7	73.7	74.2	16.12	0.16	0.05
CD3xCD33-BspAb94	44.9	49	ND	74.3	74.8	17.03	0.08	0.06
CD3xCD33-BspAb95	47.8	53.1	ND	73.3	73.7	16.12	0.07	0.06
CD3xCD33-BspAb98	46.8	51.4	ND	73.8	74.1	16.19	0.07	0.06
CD3xCD33-BspAb105	55.8	61.7	ND	74.1	74.6	16.14	0.07	0.05
CD3xCD33-BspAb115	51.1	57.1	72.4	74.3	74.8	16.15	0.07	0.06
CD3xCD33-BspAb116	52.9	58.3	72.2	74.6	75.2	16.14	0.07	0.05
CD3xCD33-BspAb117	44.4	48.2	59.6	74.1	74.3	16.22	0.08	0.05
CD3xCD33-BspAb118	49	55	ND	73.7	74.2	16.35	0.08	0.05
CD3xCD33-BspAb119	54.4	60.4	ND	73.2	73.7	16.08	0.1	0.06
CD3xCD33-BspAb124	56.8	66.4	86.7	73.2	73.9	16.05	0.08	0.06
CD3xCD33-BspAb126	54.2	60.2	70.5	73.5	73.8	16.07	0.09	0.06
CD3xCD33-BspAb42	50.6	56.4	72.7	74.4	74.7	16.38	0.06	0.05
CD3xCD33-BspAb38	50.5	59	72	74.1	74.5	19.65, 20.64	0.08	0.06
CD3xCD33-BspAb52	51.1	58.2	72.1	74	74.4	ND	0.46	0.07
CD3xCD33-BspAb45	51.8	56.9	72	74.1	74.6	17.35	0.08	0.05
CD3xCD33-BspAb44	50.4	57.1	ND	73.7	74.1	16.21	0.07	0.05
CD3xCD33-BspAb65	55.1	60.6	73.2	75.5	76.2	16.83	0.07	0.06
CD3xCD33-BspAb36	54.6	61.6	71.7	73.4	73.8	16.22	0.11	0.06
CD3xCD33-BspAb37	54.7	61.9	82.8	73.6	73.9	16.22	0.07	0.06
CD3xCD33-BspAb51	52.11	61.26	69.9	73.3	73.63	16.16	0.07	0.05

CLAIMS

What is claimed is:

1. An isolated anti-CD3 antibody, or an antigen-binding fragment thereof, comprising:

i) a heavy chain variable region comprising a VHCDR1 selected from any of SEQ ID NOs: 345-457, a VHCDR2 selected from any of SEQ ID NOs: 458-573, and a VHCDR3 selected from any of SEQ ID NOs: 574-687 and

ii) a light chain variable region comprising a VLCDR1 selected from any of SEQ ID NOs :1-113, a VLCDR2 selected from any of SEQ ID NOs: 114-226, and a VLCDR3 selected from any of SEQ ID NOs :227-377.

2. The antibody, or antigen-binding fragment thereof, of claim 1, wherein the VH is selected from any one of SEQ ID NOs: 915-1141.

3. The antibody, or antigen-binding fragment thereof, of claim 1 or claim 2, wherein the VL is selected from any one of SEQ ID NOs: 688-914.

4. The antibody, or antigen-binding fragment thereof, of any one of claims 1-3, wherein the antibody is human.

5. The antibody, or antigen-binding fragment thereof, of any one of claims 1-3, wherein the antibody is chimeric.

6. The antibody, or antigen-binding fragment thereof, of any one of claims 1-5, wherein the antibody is selected from a single-variable domain antibody, single chain antibody, a scFv, a bispecific antibody, a multi-specific antibody, a Fab, a F(ab')2, and a whole antibody.

7. The antibody, or antigen-binding fragment thereof, of claim 6, wherein the antibody is a multi-specific antibody.

8. The antibody, or antigen-binding fragment thereof, of claim 6, wherein the antibody is a bispecific antibody comprising first and second Fc domains.

9. The antibody, or antigen-binding fragment thereof, of claim 8, wherein the bispecific antibody further comprises a targeting antibody.

10. The antibody, or antigen-binding fragment thereof, of claim 9, wherein the targeting antibody is an anti-tumor antibody, or an antigen-binding fragment thereof.

11. The antibody, or antigen-binding fragment thereof, of any one of claims claim 6-10, wherein the anti-CD3 antibody, or the antigen-binding fragment thereof, comprises an scFv.

12. The antibody, or antigen-binding fragment thereof, of claim 6 or claim 11, wherein the anti-CD3 scFv antibody comprises an amino acid sequence selected from any one of SEQ ID NOs: 1155-1236.

13. The antibody, or antigen-binding fragment thereof, of claim 11 or 12, wherein the anti-CD3 scFv antibody is operably linked to the first Fc domain.

14. The antibody, or antigen-binding fragment thereof, of claim 13, wherein the anti-CD3 scFv antibody is operably linked to the first Fc domain through a first linker.

15. The antibody, or antigen-binding fragment thereof, of any one of claims 9-14, wherein the targeting antibody, or the antigen-binding fragment thereof, comprises a Fab fragment or a $F(ab')_2$ fragment.

16. The antibody, or antigen-binding fragment thereof, of claim 15, wherein the targeting Fab or $F(ab')_2$ fragment is operably linked to the second Fc domain.

17. The antibody, or antigen-binding fragment thereof, of claim 16, wherein the targeting Fab or $F(ab')_2$ fragment is operably linked to the second Fc domain through a second linker.

18. The antibody, or antigen-binding fragment thereof, of claim 15 or 17, wherein the first linker or second linker is a variable length Gly-Ser linker.

19. The antibody, or antigen-binding fragment thereof, of claim 18, wherein the first linker and second linker are independently selected from SEQ ID NOs.: 1146-1149, and 1237-1238.

20. The antibody, or antigen-binding fragment thereof, of any one of claims 8-19, wherein the first and second Fc domain comprises complementary mutations selected from knobs-into-holes (KIH) mutations, K409R/F405L, HA-TF and related mutations, skew mutations, ZW mutations, 7.8.60 mutations or related mutations, DD-KK mutations or related mutations, EW-RVT mutations or related mutations, strand-exchange engineered domains (SEED), Duobody mutations, CrossMAb mutations, and A107 mutations or related mutations.

21. The antibody, or antigen-binding fragment thereof, of claim 20, wherein (1) the first Fc domain comprises a T366W mutation and the second Fc domain comprises T366S/L368A/Y407V mutations; (2) the first Fc domain comprises T366S/L368A/Y407V mutations and the second Fc domain comprises a T366W mutation; (3) the first Fc domain

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comprises S354C/T366W mutations and the second Fc domain comprises Y349C/T366S/L368A/Y407V mutations; (4) the first Fc domain comprises Y349C/T366S/L368A/Y407V mutations and the second Fc domain comprises S354C/T366W mutation; (5) the first Fc domain comprises S354C/T366W mutations and the second Fc domain comprises Y349C/T366S/L368A/Y407V/H435R/Y436F mutations; (6) the first Fc domain comprises Y349C/T366S/L368A/ Y407V/H435R/Y436F mutations and the second Fc domain comprises S354C/T366W mutations; 7) the first Fc domain comprises S354C/T366W/H435R/Y436F mutations and the second Fc domain comprises Y349C/T366S/L368A/Y407V mutations; or 8) the first Fc domain comprises Y349C/T366S/L368A/Y407V mutations and the second Fc domain comprises S354C/T366W/H435R/Y436F mutations.

22. The antibody, or antigen-binding fragment thereof, of claim 20, wherein (1) the first and second Fc domains comprise the amino acid sequences of SEQ ID NOs: 1142 and 1143, respectively; or (2) the first and second Fc domains comprise the amino acid sequences of SEQ ID NOs: 1143 and 1142, respectively.

23. The antibody, or antigen-binding fragment thereof, of claim 20, wherein (1) the anti-CD3 antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1144, and the anti-tumor antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1145; or (2) the anti-CD3 antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1145, and the anti-tumor antibody comprises a constant region comprising the amino acid sequence of SEQ ID NO: 1144.

24. The antibody, or antigen-binding fragment thereof, of claim 20, wherein (1) the first Fc domain comprises a S364H mutation and the second Fc domain comprises a Y349T mutation; (2) the first Fc domain comprises a Y349T mutation and the second Fc domain comprises a S364H mutation; (3) the first Fc domain comprises a F405A mutation and the second Fc domain comprises a T394F mutation; (4) the first Fc domain comprises a T394F mutation and the second Fc domain comprises a F405A mutation; (5) the first Fc domain comprises S364H/T394F mutations and the second Fc domain comprises Y349T/F405A mutations; (6) the first Fc domain comprises Y349T/F405A mutations and the second Fc domain comprises S364H/T394F mutations; (7) the first Fc domain comprises S364H/F405A mutations and the second Fc domain Y349T/T394F mutations; or (8) the first Fc domain comprises Y349T/T394F mutations and the second Fc domain S364H/F405A mutations.

25. The antibody, or antigen-binding fragment thereof, of claim 20, wherein (1) the first Fc domain comprises S364K/E357Q mutations and the second Fc domain comprises L368D/K370S mutations; (2) the first Fc domain comprises L368D/K370S mutations and the second Fc domain comprises S364K/E357Q mutations; (3) the first Fc domain comprises L368D/K370S mutations and the second Fc domain comprises a S364K mutation; (4) the first Fc domain comprises a S364K mutation and the second Fc domain comprises L368D/K370S mutations; (5) the first Fc domain comprises L368E/K370S mutations and the second Fc domain comprises a S364K mutation; (6) the first Fc domain comprises a S364K mutation and the second Fc domain comprises L368E/K370S mutations; (7) the first Fc domain comprises T411E/K360E/Q362E mutations and the second Fc domain comprises a D401K mutation; (8) the first Fc domain comprises a D401K mutation and the second Fc domain comprises T411E/K360E/Q362E mutations; (9) the first Fc domain comprises L368D/K370S mutations and the second Fc domain comprises S364K/E357L mutations; (10) the first Fc domain comprises S364K/E357L mutations and the second Fc domain comprises L368D/K370S mutations; (11) the first Fc domain comprises a K370S mutation and the second Fc domain comprises S364K/E357Q mutations; (12) the first Fc domain comprises S364K/E357Q mutations and the second Fc domain comprises a K370S mutation; (13) the first Fc domain comprises T366S/L368A/Y407V mutations and the second Fc domain comprises a T366W mutation; (14) the first Fc domain comprises a T366W mutation and the second Fc domain comprises T366S/L368A/Y407V mutations; (15) the first Fc domain comprises T366S/L368A/Y407V/Y349C mutations and the second Fc domain comprises T366W/S354C mutations; or (16) the first Fc domain comprises T366W/S354C mutations and the second Fc domain comprises T366S/L368A/Y407V/Y349C mutations.

26. The antibody, or antigen-binding fragment thereof, of claim 20, wherein (1) the first Fc domain comprises F405A/Y407V mutations and the second Fc domain comprises a T394W mutation; (2) the first Fc domain comprises a T394W mutation and the second Fc domain comprises F405A/Y407V mutations; (3) the first Fc domain comprises F405A/Y407V mutations and the second Fc domain comprises T366I/T394W mutations; (4) the first Fc domain comprises T366I/T394W mutations and the second Fc domain comprises F405A/Y407V mutations; (5) the first Fc domain comprises F405A/Y407V mutations and the second Fc domain comprises T366L/T394W mutations; (6) the first Fc domain comprises T366L/T394W mutations and the second Fc domain comprises F405A/Y407V mutations; (7) the first Fc domain comprises F405A/Y407V mutations and the second Fc domain comprises

T366L/K392M/T394W mutations; (8) the first Fc domain comprises T366L/K392M/T394W mutations and the second Fc domain comprises F405A/Y407V mutations; (9) the first Fc domain comprises L351Y/F405A/Y407V mutations and the second Fc domain comprises T366L/K329M/T394W mutations; (10) the first Fc domain comprises T366L/K329M-/T394W mutations and the second Fc domain comprises L351Y/F405A/Y407V mutations; (11) the first Fc domain comprises T350V/L351Y/F405A/Y407V mutations and the second Fc domain comprises T350V/T366L/K392M/T394W mutations; (12) the first Fc domain comprises T350V/T366L/K392M/T394W mutations and the second Fc domain comprises T350V/L351Y/F405A/Y407V mutations; (13) the first Fc domain comprises T350V/L351Y/F405A/Y407V mutations and the second Fc domain comprises T350V/T366L-/K392L/T394W mutations; or (14) the first Fc domain comprises T350V/T366L/K392L-/T394W mutations and the second Fc domain comprises T350V/L351Y/F405A/Y407V mutations.

27. The antibody, or antigen-binding fragment thereof, of claim 20, wherein (1) the first Fc domain comprises D399M/Y407A mutations and the second Fc domain comprises T366V/K409V mutations; (2) the first Fc domain comprises T366V/K409V mutations and the second Fc domain comprises D399M/Y407A mutations; (3) the first Fc domain comprises K360D/D399M/Y407A mutations and the second Fc domain comprises E345R/Q347R/T366V/K409V mutations; (4) the first Fc domain comprises E345R/Q347R/T366V/K409V mutations and the second Fc domain comprises K360D/D399M/Y407A mutations; (5) the first Fc domain comprises Y349S/K370Y/T366V-/K409V mutations and the second Fc domain comprises E357D/S364Q/Y407A mutations; (6) the first Fc domain comprises E357D/S364Q/Y407A mutations and the second Fc domain comprises Y349S/K370Y/T366V/K409V mutations; (7) the first Fc domain comprises Y349S/K370Y/T366M/K409V mutations, and the second Fc domain comprises E356G/E357D/S364Q/Y407A mutations; (8) the first Fc domain comprises E356G/E357D/S364Q/Y407A mutations, and the second Fc domain comprises Y349S/K370Y/T366M/K409V mutations; (9) the first Fc domain comprises Y349S/K370Y/T366M/K409V mutations and the second Fc domain comprises E357D/S364R/Y407A mutations; or (10) the first Fc domain comprises E357D/S364R/Y407A mutations and the second Fc domain comprises Y349S/K370Y/T366M/K409V mutations.

28. The antibody, or antigen-binding fragment thereof, of claim 20, wherein (1) the first Fc domain comprises K409D/K392D mutations and the second Fc domain comprises D399K/E356K mutations; (2) the first Fc domain comprises D399K/E356K mutations and the second Fc domain comprises K409D/K392D mutations; (3) the first Fc domain comprises K409E/K392D mutations and the second Fc domain comprises D399R/E356K mutations; (4) the first Fc domain comprises D399R/E356K mutations and the second Fc domain comprises K409E/K392D mutations; (5) the first Fc domain comprises K409D/K392D mutations and the second Fc domain comprises D399R/E356K mutations; (6) the first Fc domain comprises D399R/E356K mutations and the second Fc domain comprises K409D/K392D mutations; (7) the first Fc domain comprises K409E/K392D mutations and the second Fc domain comprises D399K/E356K mutations; (8) the first Fc domain comprises D399K/E356K mutations and the second Fc domain comprises K409E/K392D mutations; (9) the first Fc domain comprises K409D/K392D/K370D mutations and the second Fc domain comprises D399K/E356K/-E357K mutations; or (10) the first Fc domain comprises D399K/E356K/E357K mutations and the second Fc domain comprises K409D/K392D/K370D mutations.

29. The antibody, or antigen-binding fragment thereof, of claim 20, wherein (1) the first Fc domain comprises a K409W mutation and the second Fc domain comprises F405T/D399V mutations; (2) the first Fc domain comprises F405T/D399V mutations and the second Fc domain comprises a K409W mutation; (3) the first Fc domain comprises K360E/K409W mutations and the second Fc domain comprises Q347R/D399V/F405T mutations; (4) the first Fc domain comprises Q347R/D399V/F405T mutations and the second Fc domain comprises K360E/K409W mutations; (5) the first Fc domain comprises K360E/K409W/Y349C mutations and the second Fc domain comprises Q347R/D399V/F405T/S354C mutations; or (6) the first Fc domain comprises Q347R/D399V/F405T/S354C mutations and the second Fc domain comprises K360E/K409WY349C mutations.

30. The antibody, or antigen-binding fragment thereof, of claim 20, wherein (1) the first Fc domain comprises an AG SEED domain and the second Fc domain comprises a GA SEED domain or (2) the first Fc domain comprises a GA SEED domain and the second Fc domain comprises an AG SEED domain.

31. The antibody, or antigen-binding fragment thereof, of claim 20, wherein (1) the first Fc domain comprises K370E/K409W mutations and the second Fc domain comprises E357N/D399V/F405T mutations; (2) the first Fc domain comprises E357N/D399V/F405T mutations and the second Fc domain comprises K370E/K409W mutations; (3) the first Fc

domain comprises K370E/K409W mutations and the second Fc domain comprises E357I/S364T/D399V/F405T mutations; (4) the first Fc domain comprises E357I/S364T/D399V/F405T mutations and the second Fc domain comprises K370E/K409W mutations; (5) the first Fc domain comprises K370M/K409W mutations and the second Fc domain comprises E357M/S364W/D399V/F405T mutations; (6) the first Fc domain comprises E357M/S364W/D399V/F405T mutations and the second Fc domain comprises K370M/K409W mutations; (7) the first Fc domain comprises K370D/K409W mutations and the second Fc domain comprises E357M/D399V/F405T mutations; (8) the first Fc domain comprises E357M/D399V/F405T mutations and the second Fc domain comprises K370D/K409W mutations; (9) the first Fc domain comprises E357D/S364W/K370E mutations and the second Fc domain comprises E357N/K370R mutations; (10) the first Fc domain comprises E357N/K370R mutations and the second Fc domain comprises E357D/S364W/K370E mutations; (11) the first Fc domain comprises E357A/S364Y/K370E mutations and the second Fc domain comprises E357N/K370H mutations; (12) the first Fc domain comprises E357N/K370H mutations and the second Fc domain comprises E357A/S364Y/K370E mutations; (13) the first Fc domain comprises E357G/S364W/K370E mutations and the second Fc domain comprises an E357N mutation; (14) the first Fc domain comprises an E357N mutation and the second Fc domain comprises E357G/S364W/DK70E mutations; (15) the first Fc domain comprises E357N/S364W/K370E mutations and the second Fc domain comprises an E357N mutation; or (16) the first Fc domain comprises an E357N mutation and the second Fc domain comprises E357N/S364W/DK70E mutations.

32. The antibody, or antigen-binding fragment thereof, of any one of claims 8-31, wherein the first and/or second Fc domain are independently engineered to have improved pharmacokinetics (PK).

33. The antibody, or antigen-binding fragment thereof, of claim 32, wherein the first and/or second Fc domains comprise amino acid substitutions M428L and/or N434S.

34. The antibody, or antigen-binding fragment thereof, of claim 10, wherein the anti-tumor antibody is an anti-CD33 antibody.

35. The antibody, or antigen-binding fragment thereof, of claim 34, wherein the anti-CD33 antibody comprises the six CDRs of gemtuzumab.

36. The antibody, or antigen-binding fragment thereof, of claim 35, wherein the anti-CD33 antibody comprises the VH of gemtuzumab.

37. The antibody, or antigen-binding fragment thereof, of claim 35 or 36, wherein the anti-CD33 antibody comprises the VL of gemtuzumab.

38. The antibody, or antigen-binding fragment thereof, of claim 34, wherein the anti-CD33 antibody comprises the VH comprising the amino acid sequence of SEQ ID NO: 1151.

39. The antibody, or antigen-binding fragment thereof, of claim 34 or 38, wherein the anti-CD33 antibody comprises the VL comprising the amino acid sequence of SEQ ID NO:1152.

40. The antibody, or antigen-binding fragment thereof, of any one of claims 1-39, wherein the antibody is selected from an IgG antibody, an IgM antibody, an IgA antibody, an IgD antibody, and an IgE antibody.

41. The antibody, or antigen-binding fragment thereof, of claim 40, wherein the antibody is an IgG antibody.

42. The antibody, or antigen-binding fragment thereof, of claim 41, wherein the antibody is a variant of an IgG antibody selected from an IgG1 antibody, an IgG2 antibody, an IgG3 antibody or an IgG4 antibody.

43. The antibody, or antigen-binding fragment thereof, of claim 42, wherein the antibody comprises a modified Fc domain derived from an IgG1 molecule.

44. The antibody, or antigen-binding fragment thereof, of claim 43, wherein the modified Fc domain derived from the IgG1 molecule comprises an amino acid modification at any one of the positions selected from the group consisting of E216, R217, K218, C219, C220, C226, C229, P230, E233, L234, L235, G236, G237, P238, S239, V240, F241, K246, L251, T260, D265, V266, H268, W277, N297, E318, K322, P329, A330, P331, Q347, N348, T350, L351, K360, T366, N390, K392, T394, D399, S400, F405, Y407, K409, T411 or a combination such amino acid modifications.

45. The antibody, or antigen-binding fragment thereof, of claim 43, wherein the modified Fc domain derived from IgG1 comprises an amino acid modification selected from the group consisting of C220S, C226S, C229S, P230S, E233P, L234A, L234F, L234V, L235A, L235E, L235V, G236E, G237A, P238S, D265S, D265A, H268Q, W277T, N297G, N297Q, N297D, N297A, E318A, K322A, P329G, P329A, A330S, P331S, Q347R, Q347E, Q347K, T350V, L351Y, K360D, K360E, T366A, T366I, T366L, T366M, T366V, N390R, N390K, N390D, K392V, K392M, K392R, K392L, K392F, K392E, T394W, D399R, D399W, D399K, S400E,

S400D, S400R, S400K, F405A, F405I, F405M, F405T, F405S, F405V, F405W, Y407A, Y407I, Y407L, Y407V, K409F, K409I, K409S, K409W, T411N, T411R, T411Q, T411K, T411D, T411E, T411W, ΔE216-E222, K246R/L251E/T260R, InR234/235, InV235/236, InR236/237, InR237/238, InV238/239, InN238/239, InL238/239, InE238/239, InG238/239, InS239/240, InG240/241, InE240/241, InG240/241, InL238/239/P238Q, InE238/239/N348A, InS239/240/V266A, and InR237/238/G236A or a combination thereof.

46. The antibody, or antigen-binding fragment thereof, of claim 45, wherein the modified Fc domain derived from IgG1 comprises L234F/L235E/P331S mutations.

47. The antibody, or antigen-binding fragment thereof, of claim 42, wherein the antibody comprises a modified Fc domain derived from an IgG2 molecule.

48. The antibody, or antigen-binding fragment thereof, of claim 47, wherein the modified Fc domain derived from the IgG2 molecule comprises an amino acid modification at any one of the positions selected from the group consisting of V234, G237, P238, H268, V309, A330, and P331 or a combination thereof.

49. The antibody, or antigen-binding fragment thereof, of claim 48, wherein the modified Fc domain derived from the IgG2 molecule comprises an amino acid modification at any one of the positions selected from the group consisting of V234A, G237A, P238S, H268Q, H268A, V309L, A330S, P331S, or a combination thereof.

50. The antibody, or antigen-binding fragment thereof, of claim 42, wherein the antibody comprises a modified Fc domain derived from an IgG4 molecule.

51. The antibody, or antigen-binding fragment thereof, of claim 50, wherein the modified Fc domain derived from the IgG4 molecule comprises an amino acid modification at any one of the positions selected from the group consisting of S228, L235, L236, G237, E318, and N297 or a combination thereof.

52. The antibody, or antigen-binding fragment thereof, of claim 51, wherein the modified Fc domain derived from the IgG4 molecule comprises an amino acid modification at any one of the positions selected from the group consisting of S228P, L235A, L235E, L236E, G237A, E318A, and N297Q or a combination thereof.

53. A recombinant polynucleotide encoding an anti-CD3 antibody, or antigen-binding fragment thereof, of any one of claims 1-52.

54. An expression vector comprising the recombinant polynucleotide of claim 53.

55. A first recombinant polynucleotide encoding the heavy chain of an anti-CD3 antibody, or antigen-binding fragment thereof, of any one of claims 1-52 and a second recombinant polynucleotide encoding the light chain of an anti-CD3 antibody, or antigen-binding fragment thereof, of any one of claims 1-52.

56. A first expression vector comprising the first recombinant polynucleotide of claim 55 and a second expression vector comprising the second recombinant polynucleotide of claim 55.

57. An isolated host cell comprising the recombinant polynucleotide of claim 53, the expression vector of claim 54, the first and second recombinant polynucleotides of claim 55 or the first and second expression vectors of claim 56.

58. A method of producing the antibody, or antigen-binding fragment thereof, or any one of claims 1-52, the method comprising culturing the host cell of claim 57 under conditions suitable for expressing the antibody or fragment.

59. A composition comprising the antibody, or antigen-binding fragment thereof, of any one of claims 1-52 and a physiologically acceptable carrier.

60. A method of treating or preventing cancer in a subject in need thereof, the method comprising administering the antibody, or antigen-binding fragment thereof, of any one of claims 1-52 or the composition of claim 59 to the subject in need thereof.

61. A method of maintaining cancer remission in a subject, the method comprising administering the antibody, or antigen-binding fragment thereof, of any one of claims 1-52 or the composition of claim 59 to the subject in need thereof.

62. A method of targeting a T-cell to a tumor cell, wherein the method comprises contacting the T-cell with the antibody, or antigen-binding fragment thereof, any one of claims 8-52 or the composition of claim 59.

63. The method of any one of claims 60- 62, wherein the anti-CD3 antibody is an anti-CD3 bispecific antibody, wherein the bispecific antibody further comprises an anti-tumor antibody.

64. A method of treating or preventing an autoimmune disease or disorder in a subject in need thereof, the method comprising administering the antibody, or antigen-binding fragment thereof, of any one of claims 1-52 or the composition of claim 59 to the subject in need thereof

65. The method of claim 64, wherein the autoimmune disease or disorder is graft-versus-host disease or type I diabetes.

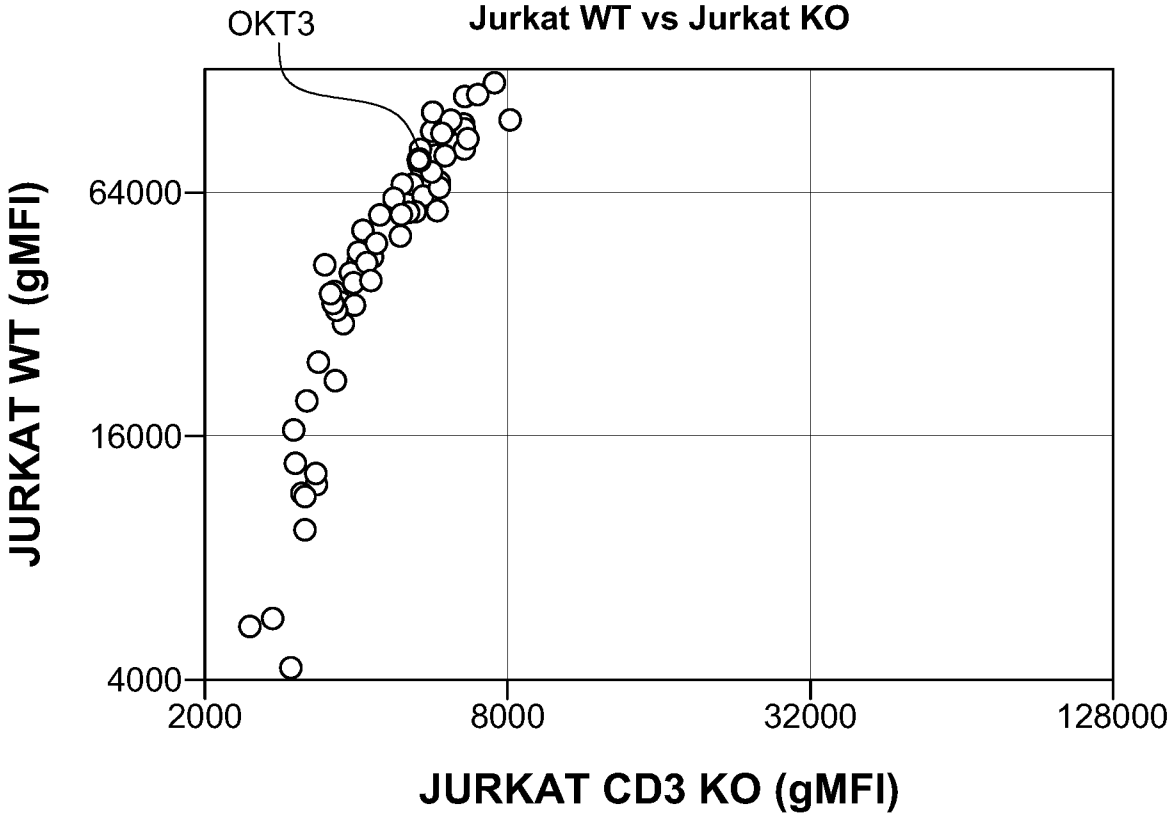

Jurkat WT vs Jurkat KO
OKT3
JURKAT WT (gMFI)
64000
16000
4000
2000
8000
32000
128000
JURKAT CD3 KO (gMFI)

FIG. 1A

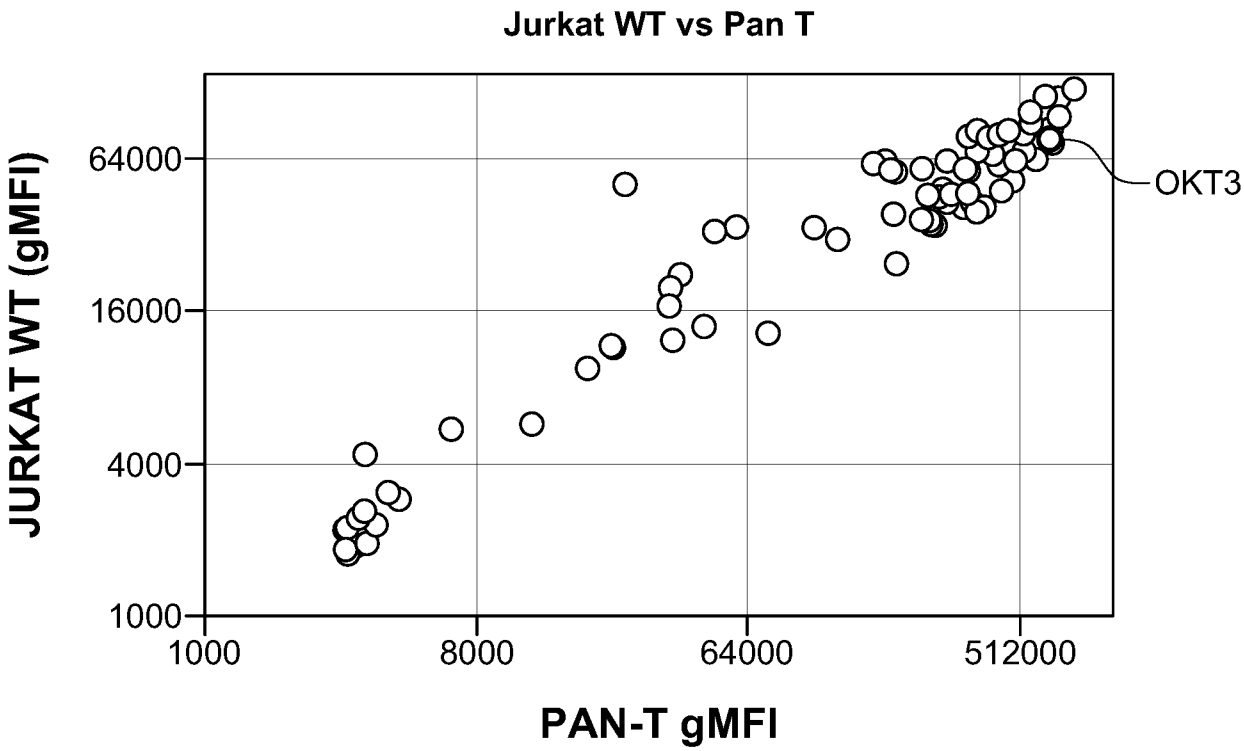

Jurkat WT vs Pan T
JURKAT WT (gMFI)
64000
16000
4000
1000
1000
8000
64000
512000
PAN-T gMFI
OKT3

FIG. 1B

Figure 2

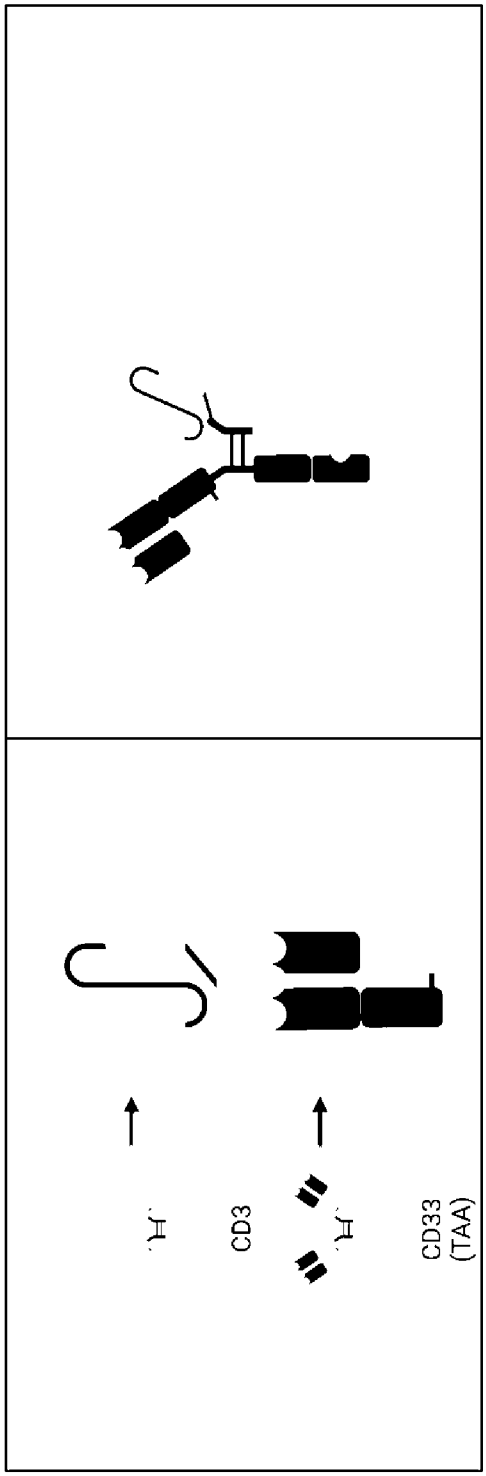


Figure 3A

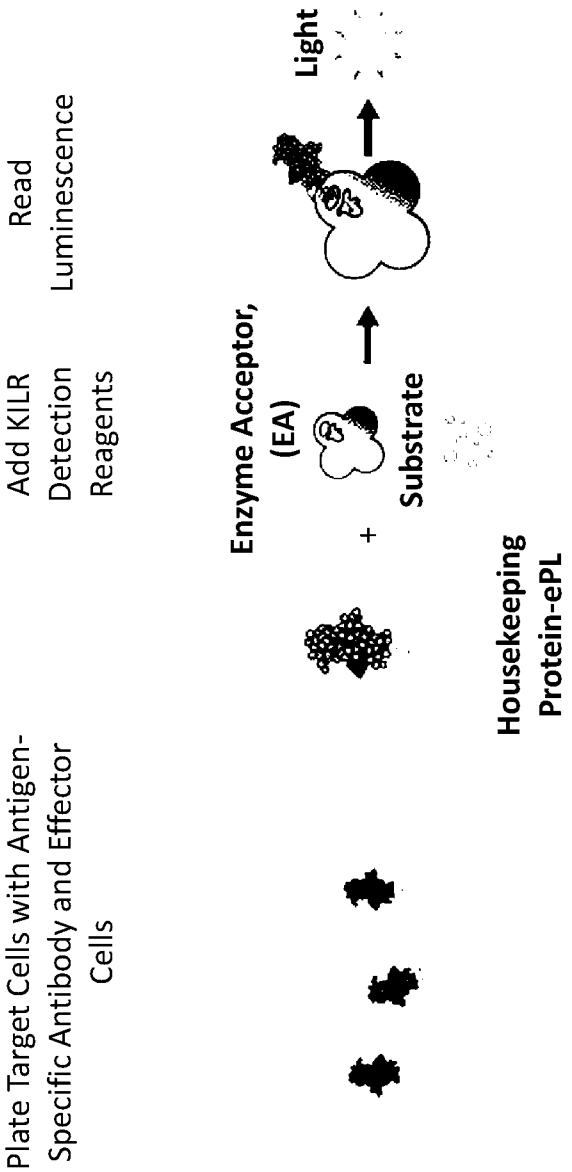
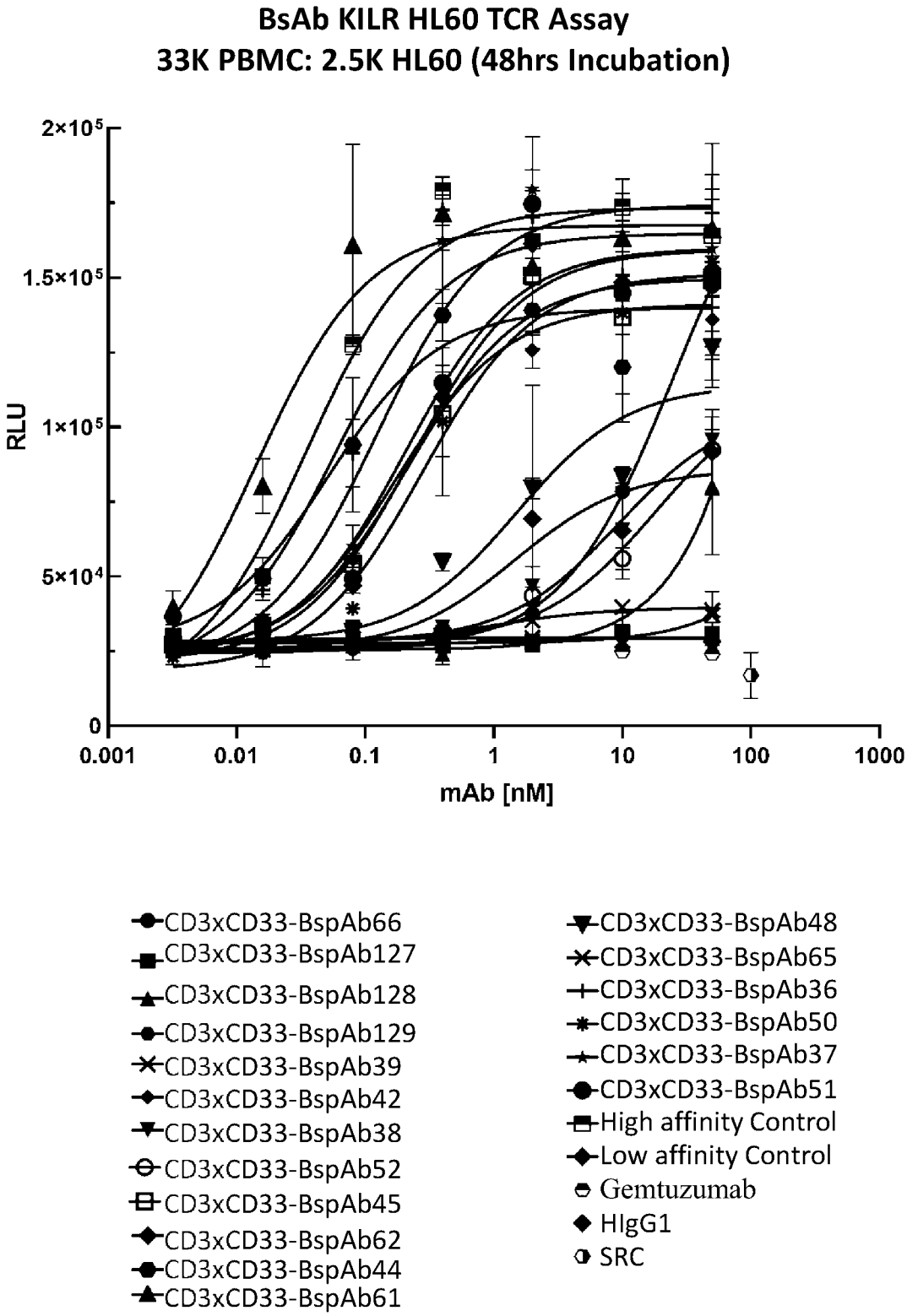


Plate Target Cells with Antigen-Specific Antibody and Effector Cells
Add KILR Detection Reagents
Read Luminescence
Enzyme Acceptor, (EA)
Substrate
Light
+
Housekeeping Protein-ePL

Figure 3B


BsAb KILR HL60 TCR Assay
33K PBMC: 2.5K HL60 (48hrs Incubation)
RLU
2×10⁵
1.5×10⁵
1×10⁵
5×10⁴
0
0.001
0.01
0.1
1
10
100
1000
mAb [nM]
CD3xCD33-BspAb66
CD3xCD33-BspAb127
CD3xCD33-BspAb128
CD3xCD33-BspAb129
CD3xCD33-BspAb39
CD3xCD33-BspAb42
CD3xCD33-BspAb38
CD3xCD33-BspAb52
CD3xCD33-BspAb45
CD3xCD33-BspAb62
CD3xCD33-BspAb44
CD3xCD33-BspAb61
CD3xCD33-BspAb48
CD3xCD33-BspAb65
CD3xCD33-BspAb36
CD3xCD33-BspAb50
CD3xCD33-BspAb37
CD3xCD33-BspAb51
High affinity Control
Low affinity Control
Gemtuzumab
HIgG1
SRC

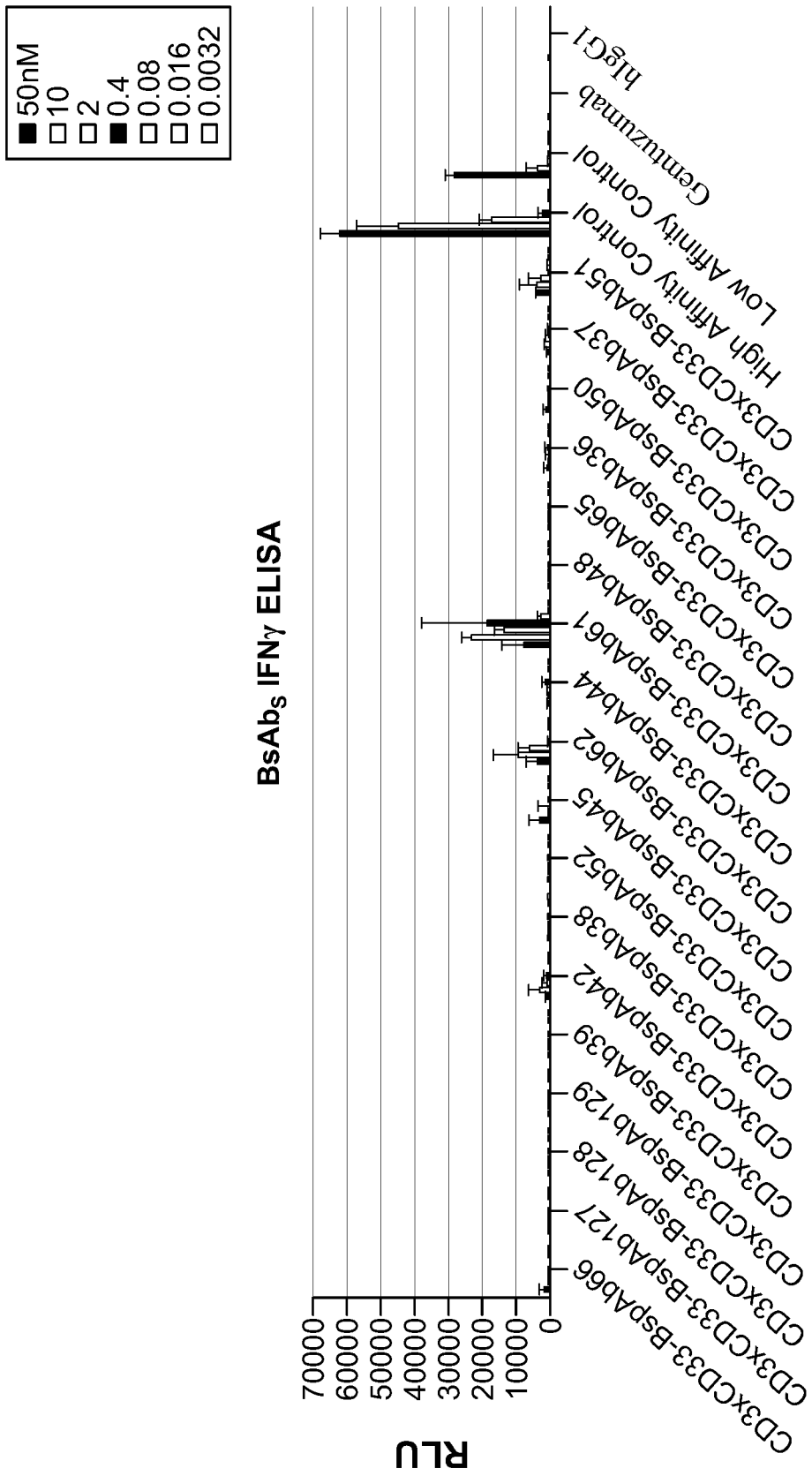

BsAb$_S$ IFNγ ELISA
RLU
0
10000
20000
30000
40000
50000
60000
70000
50nM
10
2
0.4
0.08
0.016
0.0032
CD3xCD33-BspAb66
CD3xCD33-BspAb127
CD3xCD33-BspAb128
CD3xCD33-BspAb129
CD3xCD33-BspAb39
CD3xCD33-BspAb42
CD3xCD33-BspAb38
CD3xCD33-BspAb52
CD3xCD33-BspAb45
CD3xCD33-BspAb62
CD3xCD33-BspAb44
CD3xCD33-BspAb61
CD3xCD33-BspAb48
CD3xCD33-BspAb65
CD3xCD33-BspAb36
CD3xCD33-BspAb50
CD3xCD33-BspAb37
CD3xCD33-BspAb51
High Affinity Control
Low Affinity Control
Gemtuzumab
hIgG1

FIG. 4A

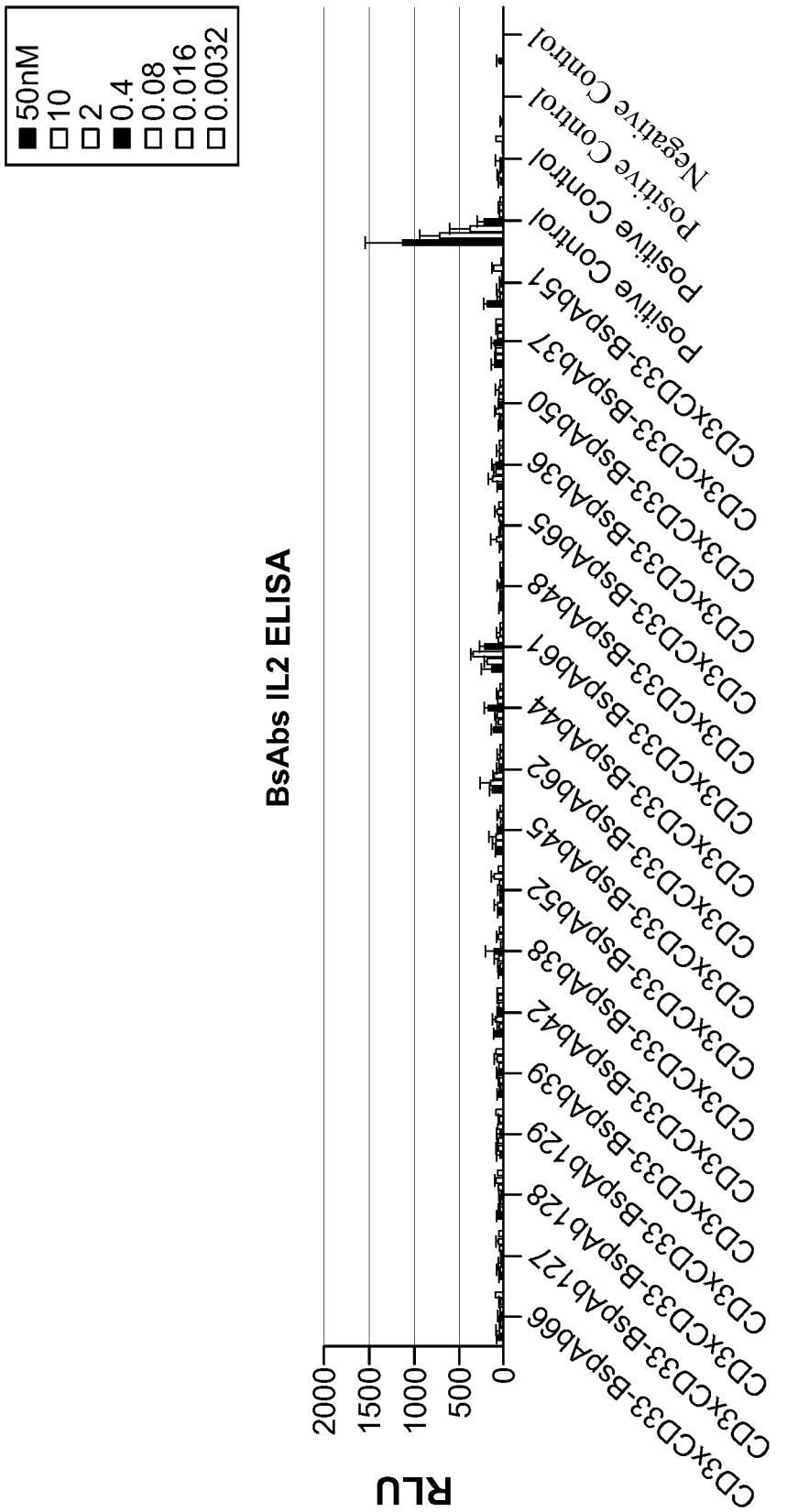

BsAbs IL2 ELISA
RLU
2000
1500
1000
500
0
50nM
10
2
0.4
0.08
0.016
0.0032
CD3xCD33-BspAb66
CD3xCD33-BspAb127
CD3xCD33-BspAb128
CD3xCD33-BspAb129
CD3xCD33-BspAb39
CD3xCD33-BspAb42
CD3xCD33-BspAb38
CD3xCD33-BspAb52
CD3xCD33-BspAb45
CD3xCD33-BspAb62
CD3xCD33-BspAb44
CD3xCD33-BspAb61
CD3xCD33-BspAb48
CD3xCD33-BspAb65
CD3xCD33-BspAb36
CD3xCD33-BspAb50
CD3xCD33-BspAb37
CD3xCD33-BspAb51
Positive Control
Positive Control
Negative Control

FIG. 4B

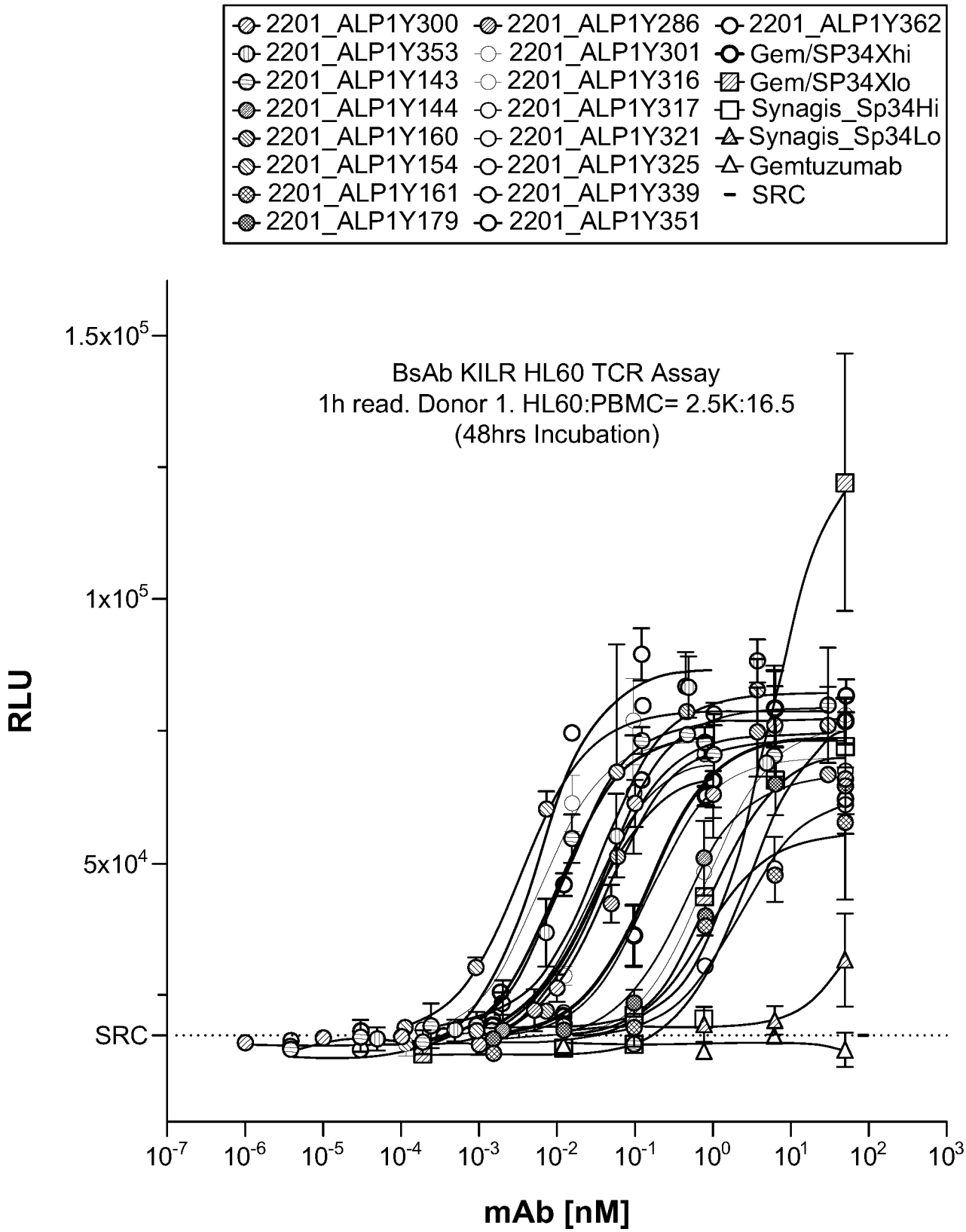

2201_ALP1Y300
2201_ALP1Y286
2201_ALP1Y362
2201_ALP1Y353
2201_ALP1Y301
Gem/SP34Xhi
2201_ALP1Y143
2201_ALP1Y316
Gem/SP34Xlo
2201_ALP1Y144
2201_ALP1Y317
Synagis_Sp34Hi
2201_ALP1Y160
2201_ALP1Y321
Synagis_Sp34Lo
2201_ALP1Y154
2201_ALP1Y325
Gemtuzumab
2201_ALP1Y161
2201_ALP1Y339
SRC
2201_ALP1Y179
2201_ALP1Y351
BsAb KILR HL60 TCR Assay
1h read. Donor 1. HL60:PBMC= 2.5K:16.5
(48hrs Incubation)
RLU
1.5x10^5
1x10^5
5x10^4
SRC
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1
10^2
10^3
mAb [nM]

FIG. 5A

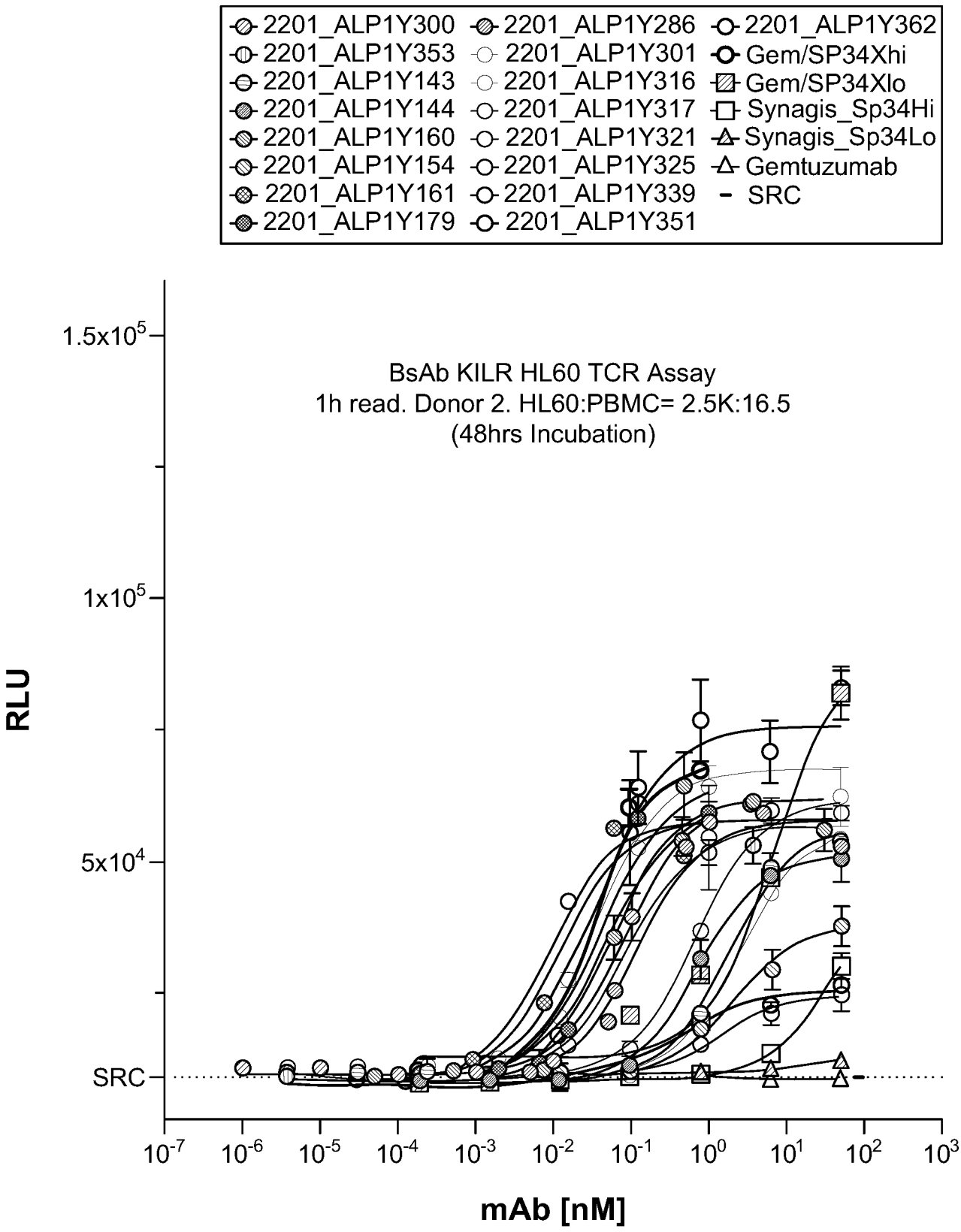

2201_ALP1Y300
2201_ALP1Y286
2201_ALP1Y362
2201_ALP1Y353
2201_ALP1Y301
Gem/SP34Xhi
2201_ALP1Y143
2201_ALP1Y316
Gem/SP34Xlo
2201_ALP1Y144
2201_ALP1Y317
Synagis_Sp34Hi
2201_ALP1Y160
2201_ALP1Y321
Synagis_Sp34Lo
2201_ALP1Y154
2201_ALP1Y325
Gemtuzumab
2201_ALP1Y161
2201_ALP1Y339
SRC
2201_ALP1Y179
2201_ALP1Y351
BsAb KILR HL60 TCR Assay
1h read. Donor 2. HL60:PBMC= 2.5K:16.5
(48hrs Incubation)
RLU
1.5x10^5
1x10^5
5x10^4
SRC
10^-7 10^-6 10^-5 10^-4 10^-3 10^-2 10^-1 10^0 10^1 10^2 10^3
mAb [nM]

FIG. 5B

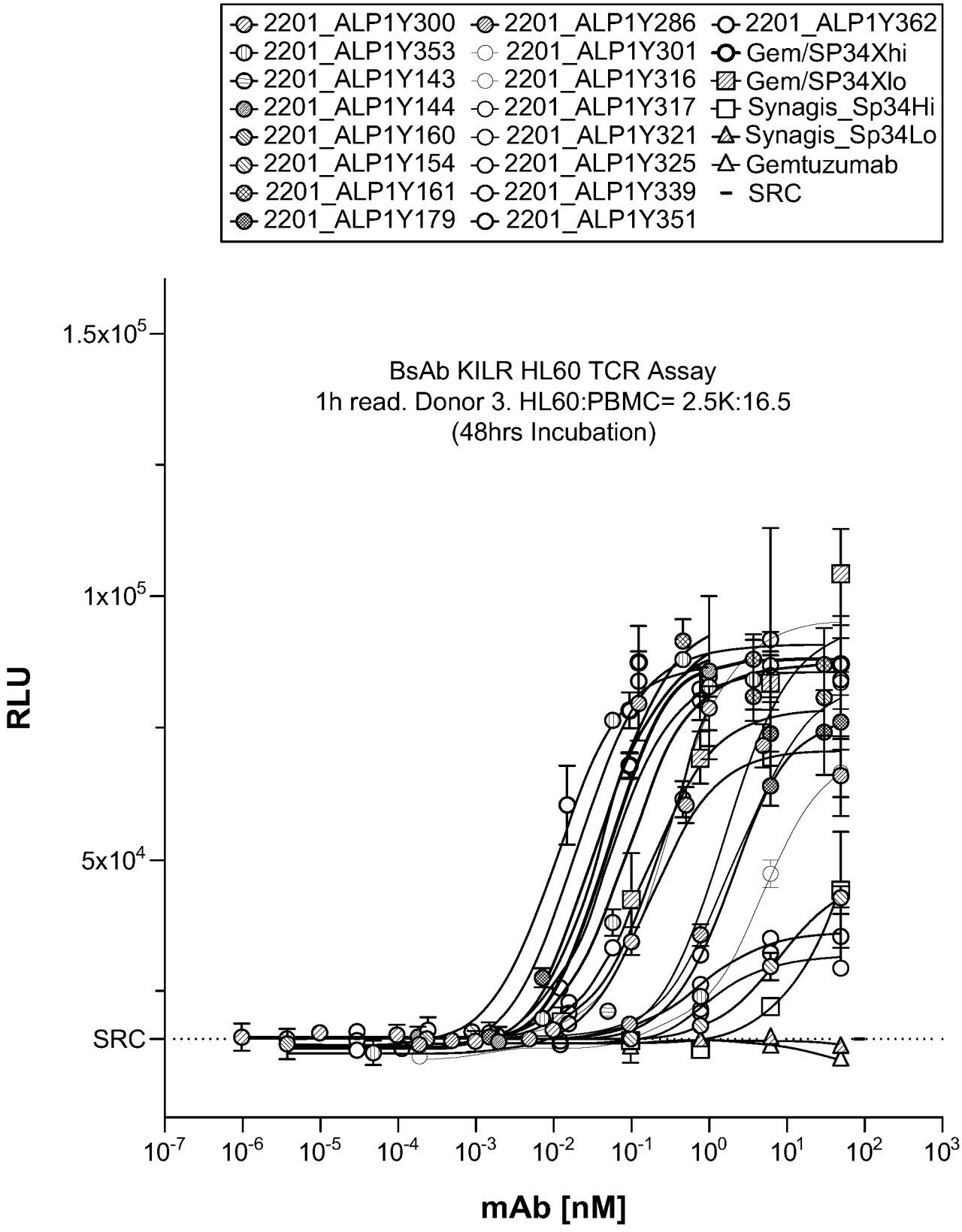

2201_ALP1Y300
2201_ALP1Y286
2201_ALP1Y362
2201_ALP1Y353
2201_ALP1Y301
Gem/SP34Xhi
2201_ALP1Y143
2201_ALP1Y316
Gem/SP34Xlo
2201_ALP1Y144
2201_ALP1Y317
Synagis_Sp34Hi
2201_ALP1Y160
2201_ALP1Y321
Synagis_Sp34Lo
2201_ALP1Y154
2201_ALP1Y325
Gemtuzumab
2201_ALP1Y161
2201_ALP1Y339
SRC
2201_ALP1Y179
2201_ALP1Y351
BsAb KILR HL60 TCR Assay
1h read. Donor 3. HL60:PBMC= 2.5K:16.5
(48hrs Incubation)
RLU
1.5x10^5
1x10^5
5x10^4
SRC
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1
10^2
10^3
mAb [nM]

FIG. 5C

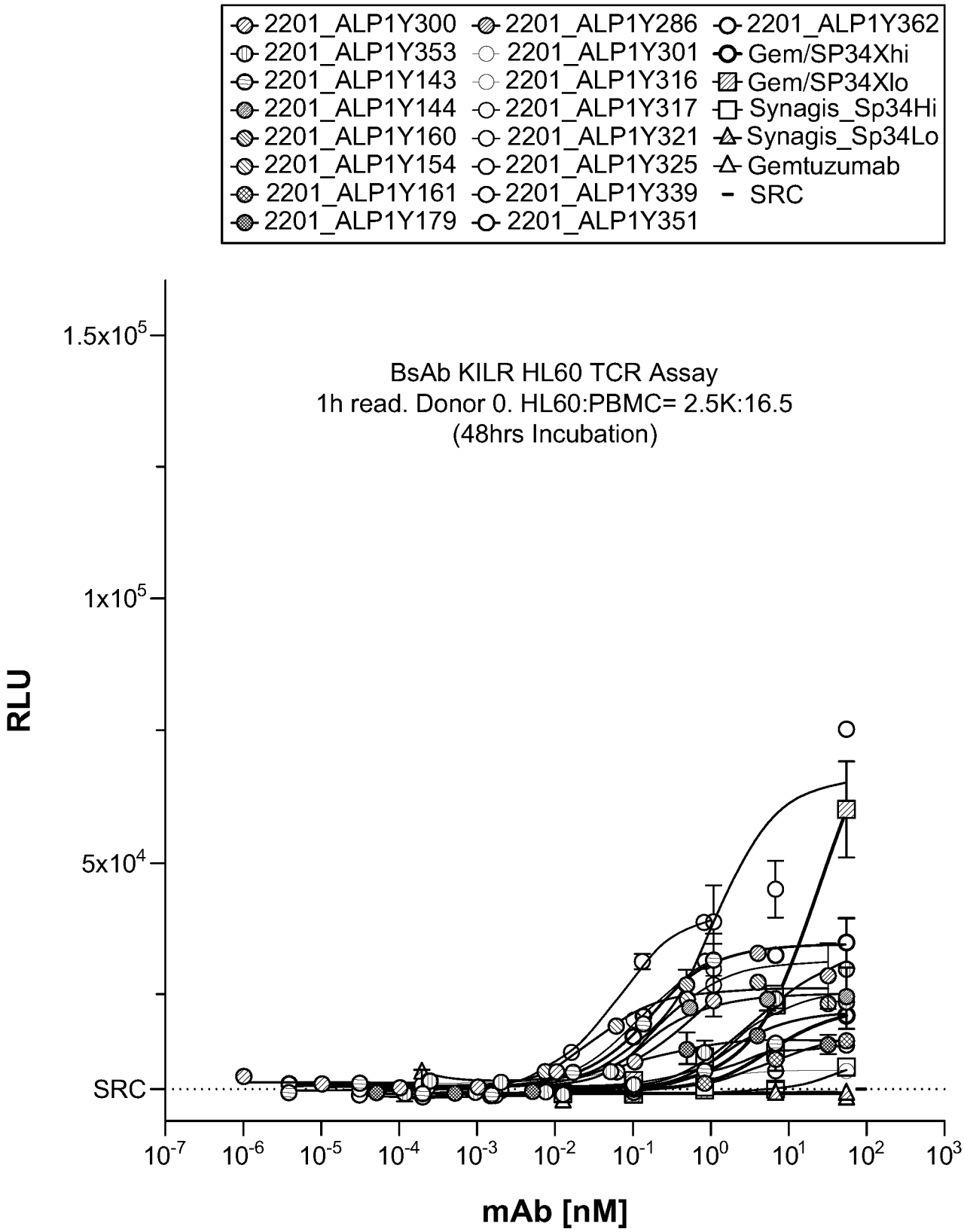

2201_ALP1Y300
2201_ALP1Y286
2201_ALP1Y362
2201_ALP1Y353
2201_ALP1Y301
Gem/SP34Xhi
2201_ALP1Y143
2201_ALP1Y316
Gem/SP34Xlo
2201_ALP1Y144
2201_ALP1Y317
Synagis_Sp34Hi
2201_ALP1Y160
2201_ALP1Y321
Synagis_Sp34Lo
2201_ALP1Y154
2201_ALP1Y325
Gemtuzumab
2201_ALP1Y161
2201_ALP1Y339
SRC
2201_ALP1Y179
2201_ALP1Y351
BsAb KILR HL60 TCR Assay
1h read. Donor 0. HL60:PBMC= 2.5K:16.5
(48hrs Incubation)
RLU
1.5x10^5
1x10^5
5x10^4
SRC
10^-7
10^-6
10^-5
10^-4
10^-3
10^-2
10^-1
10^0
10^1
10^2
10^3
mAb [nM]

FIG. 5D

Figure 6A

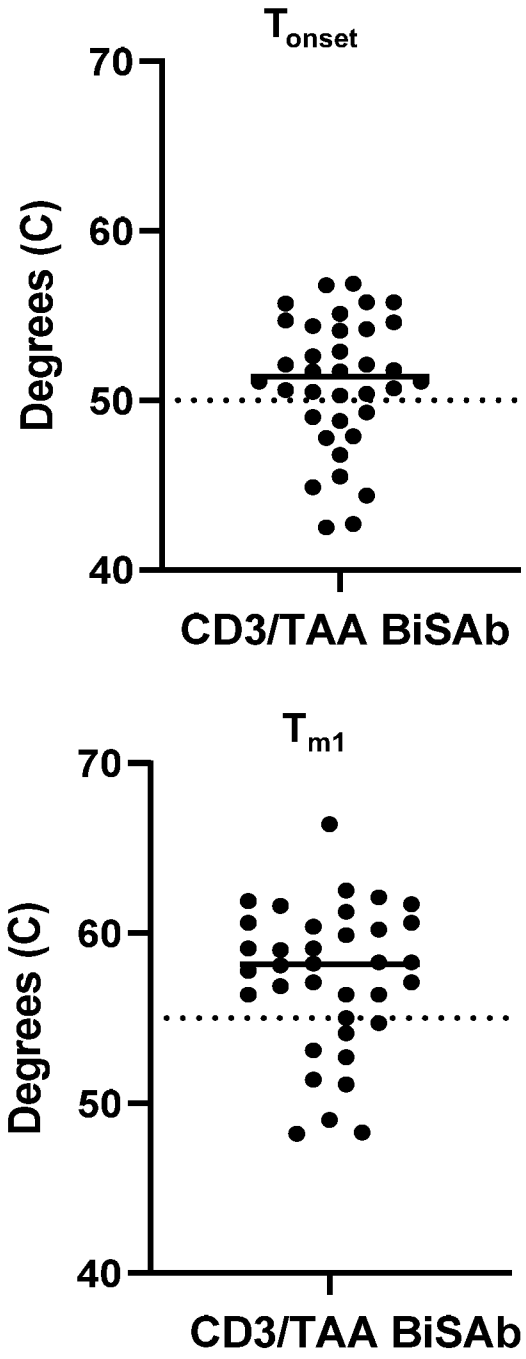
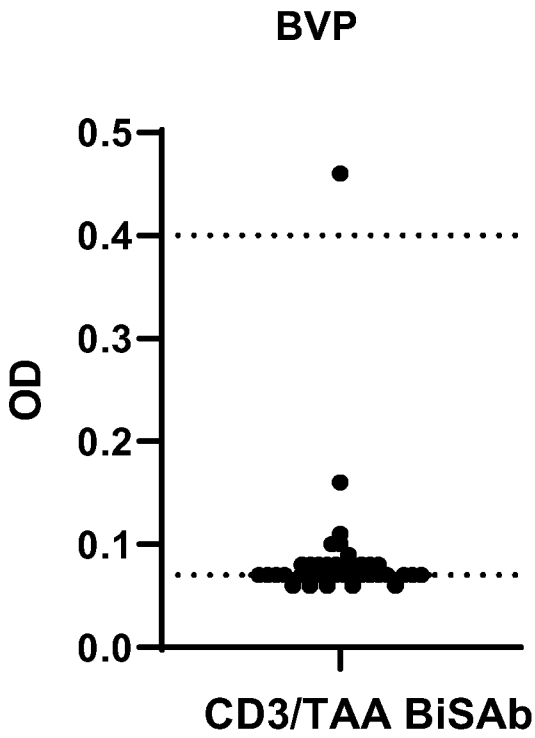

T_{onset}
70
60
50
40
Degrees (C)
CD3/TAA BiSAb
T_{m1}
70
60
50
40
Degrees (C)
CD3/TAA BiSAb

Figure 6B


BVP
0.5
0.4
0.3
0.2
0.1
0.0
OD
CD3/TAA BiSAb

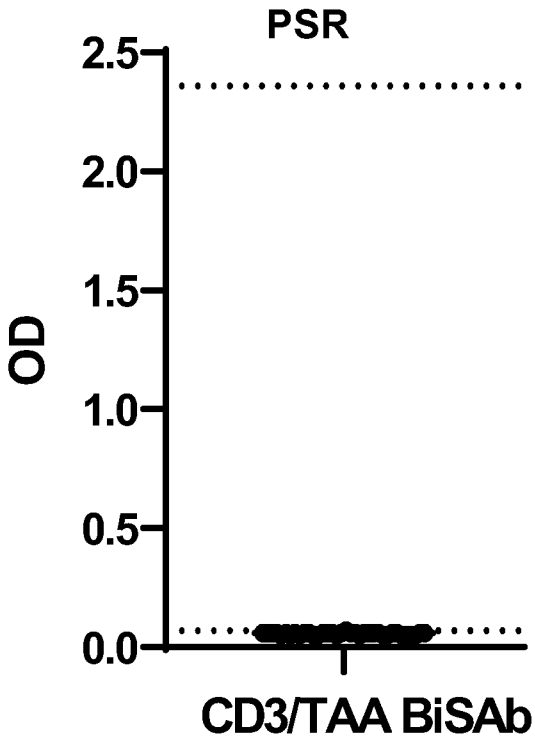

PSR
2.5
2.0
1.5
1.0
0.5
0.0
OD
CD3/TAA BiSAb

Figure 6C