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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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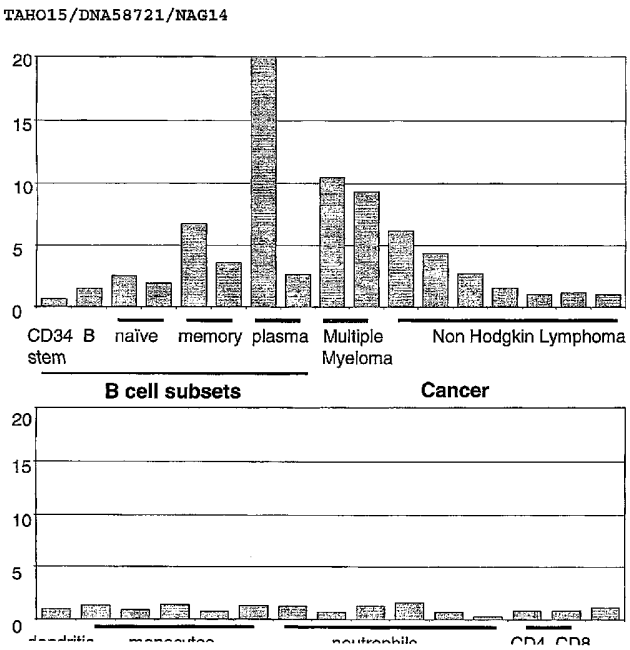
[Continued on next page]

(54) Title: COMPOSITIONS AND METHODS FOR THE TREATMENT OF TUMOR OF HEMATOPOIETIC ORIGIN



(57) Abstract: The present invention is directed to compositions of matter useful for the treatment of hematopoietic tumor in mammals and to methods of using those compositions of matter for the same.

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INTERNATIONAL SEARCH REPORT

Inter I Application No
PCT/US2004/038262

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K39/00 C07K14/705

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00/12130 A (SMITHKLINE BEECHAM CORPORATION; SMITHKLINE BEECHAM PLC; HARROP, JEREMY) 9 March 2000 (2000-03-09)	1-4, 12-16, 19, 21-28, 30-32, 40,41
Y	SEQ ID No: 2 has 99.85 % identity (99.85 % ungapped) over 648 (q:s=1-648:1-648) with subject GSP:AAY82527 the whole document	5-11,17, 18,20, 29,33-39

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
11 May 2005	23. 08. 2005

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Rojo Romeo, E

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	HERRERA L ET AL: "Treatment of SCID/human B cell precursor ALL with anti-CD19 and anti-CD22 immunotoxins." LEUKEMIA : OFFICIAL JOURNAL OF THE LEUKEMIA SOCIETY OF AMERICA, LEUKEMIA RESEARCH FUND, U.K. FEB 2003, vol. 17, no. 2, February 2003 (2003-02), pages 334-338, XP002327747 ISSN: 0887-6924 the whole document	1-41
Y	SZATROWSKI TED P ET AL: "Lineage specific treatment of adult patients with acute lymphoblastic leukemia in first remission with anti-B4-blocked ricin or high-dose cytarabine: Cancer and leukemia group B study 9311." CANCER, vol. 97, no. 6, 15 March 2003 (2003-03-15), pages 1471-1480, XP002327748 ISSN: 0008-543X the whole document	1-41
Y	TOBINAI KENSEI: "Rituximab and other emerging antibodies as molecular target-based therapy of lymphoma." INTERNATIONAL JOURNAL OF CLINICAL ONCOLOGY / JAPAN SOCIETY OF CLINICAL ONCOLOGY. AUG 2003, vol. 8, no. 4, August 2003 (2003-08), pages 212-223, XP002327749 ISSN: 1341-9625 the whole document	1-41
Y	MIYAKE K ET AL: "RP105, A NOVEL B CELL SURFACE MOLECULE IMPLICATED IN B CELL ACTIVATION, IS A MEMBER OF THE LEUCINE-RICH REPEAT PROTEIN FAMILY" JOURNAL OF IMMUNOLOGY, THE WILLIAMS AND WILKINS CO. BALTIMORE, US, vol. 154, no. 7, 1 April 1995 (1995-04-01), pages 3333-3340, XP002032346 ISSN: 0022-1767 the whole document	1-41

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INTERNATIONAL SEARCH REPORT

Inter I Application No
PCT/US2004/038262

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	MIURA Y ET AL: "MOLECULAR CLONING OF A HUMAN RP105 HOMOLOGUE AND CHROMOSOMAL LOCALIZATION OF THE MOUSE AND HUMAN RP105 GENES (LY64 AND LY64)" GENOMICS, ACADEMIC PRESS, SAN DIEGO, US, vol. 38, no. 3, 15 December 1996 (1996-12-15), pages 299-304, XP000674542 ISSN: 0888-7543 the whole document	1-41
Y	YAMASHITA YOSHIO ET AL: "Activation mediated by RP105 but not CD40 makes normal B cells susceptible to anti-IgM-induced apoptosis: A role for Fc receptor coligation" JOURNAL OF EXPERIMENTAL MEDICINE, vol. 184, no. 1, 1996, pages 113-120, XP002327750 ISSN: 0022-1007 the whole document	1-41
P,Y	TUR MEHMET K ET AL: "Recombinant CD64-specific single chain immunotoxin exhibits specific cytotoxicity against acute myeloid leukemia cells." CANCER RESEARCH, vol. 63, no. 23, 1 December 2003 (2003-12-01), pages 8414-8419, XP002327751 ISSN: 0008-5472 the whole document	1-41
P,X	WO 2004/054615 A (MITRA MEDICAL TECHNOLOGY AB; SANDBERG, BENGT; NILSSON, RUNE) 1 July 2004 (2004-07-01) the whole document	1-41

INTERNATIONAL SEARCH REPORT

Ir onal application No.
CT/US2004/038262

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. [X] Claims Nos.: 1-41 (partially)
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 1-41 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

2. [ ] Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. [ ] Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. [ ] As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. [ ] As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. [ ] As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. [X] No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-41 (partially)

Remark on Protest

[ ] The additional search fees were accompanied by the applicant's protest.

[ ] No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-41 (partially)

Method of inhibiting the growth of a cell that expresses a protein having at least 80% amino acid sequence identity to SEQ ID NO: 2 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 1 or by the full-length coding sequence of SEQ ID NO: 1), or wherein the growth of said cell is at least in part dependent upon a growth potentiating effect of a protein having at least 80% amino acid sequence identity to SEQ ID NO: 2 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 1 or by the full-length coding sequence of SEQ ID NO: 1), said method comprising contacting said cell with an antibody, oligopeptide, or organic molecule to said protein; method of treating or preventing a cell proliferative disorder associated with increased expression or activity of a protein having at least 80% amino acid identity to SEQ ID NO: 2 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 1 or by the full-length coding sequence of SEQ ID NO: 1).

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2. claims: 1-41 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Method of inhibiting the growth of a cell that expresses a protein having at least 80% amino acid sequence identity to SEQ ID NO: 8 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 7 or by the full-length coding sequence of SEQ ID NO: 7), or wherein the growth of said cell is at least in part dependent upon a growth potentiating effect of a protein having at least 80% amino acid sequence identity to SEQ ID NO: 8 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 7 or by the full-length coding sequence of SEQ ID NO: 7), said method comprising contacting said cell with an antibody, oligopeptide, or organic molecule to said protein; method of treating or preventing a cell proliferative disorder associated with increased expression or activity of a protein having at least 80% amino acid identity to SEQ ID NO: 8 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 7 or by the full-length coding sequence of SEQ ID NO: 7).

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3. claims: 1-41 (partially)

Method of inhibiting the growth of a cell that expresses a protein having at least 80% amino acid sequence identity to SEQ ID NO: 10 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 9 or by the full-length coding sequence of SEQ ID NO: 9), or wherein the growth of said cell is at least in part dependent upon a growth potentiating effect of a protein having at least 80% amino acid sequence identity to SEQ ID NO: 10 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 9 or by the full-length coding sequence of SEQ ID NO: 9), said method comprising contacting said cell with an antibody, oligopeptide, or organic molecule to said protein; method of treating or preventing a cell proliferative disorder associated with increased expression or activity of a protein having at least 80% amino acid identity to SEQ ID NO: 10 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 9 or by the full-length coding sequence of SEQ ID NO: 9).

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4. claims: 1-41 (partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Method of inhibiting the growth of a cell that expresses a protein having at least 80% amino acid sequence identity to SEQ ID NO: 12 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 11 or by the full-length coding sequence of SEQ ID NO: 11), or wherein the growth of said cell is at least in part dependent upon a growth potentiating effect of a protein having at least 80% amino acid sequence identity to SEQ ID NO: 12 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 11 or by the full-length coding sequence of SEQ ID NO: 11), said method comprising contacting said cell with an antibody, oligopeptide, or organic molecule to said protein; method of treating or preventing a cell proliferative disorder associated with increased expression or activity of a protein having at least 80% amino acid identity to SEQ ID NO: 12 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 11 or by the full-length coding sequence of SEQ ID NO: 11).

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5. claims: 1-41 (partially)

Method of inhibiting the growth of a cell that expresses a protein having at least 80% amino acid sequence identity to SEQ ID NO: 16 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 15 or by the full-length coding sequence of SEQ ID NO: 15), or wherein the growth of said cell is at least in part dependent upon a growth potentiating effect of a protein having at least 80% amino acid sequence identity to SEQ ID NO: 16 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 15 or by the full-length coding sequence of SEQ ID NO: 15), said method comprising contacting said cell with an antibody, oligopeptide, or organic molecule to said protein; method of treating or preventing a cell proliferative disorder associated with increased expression or activity of a protein having at least 80% amino acid identity to SEQ ID NO: 16 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 15 or by the full-length coding sequence of SEQ ID NO: 15).

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

6. claims: 1-41 (partially)

Method of inhibiting the growth of a cell that expresses a protein having at least 80% amino acid sequence identity to SEQ ID NO: 20 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 19 or by the full-length coding sequence of SEQ ID NO: 19), or wherein the growth of said cell is at least in part dependent upon a growth potentiating effect of a protein having at least 80% amino acid sequence identity to SEQ ID NO: 20 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 19 or by the full-length coding sequence of SEQ ID NO: 19), said method comprising contacting said cell with an antibody, oligopeptide, or organic molecule to said protein; method of treating or preventing a cell proliferative disorder associated with increased expression or activity of a protein having at least 80% amino acid identity to SEQ ID NO: 20 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 19 or by the full-length coding sequence of SEQ ID NO: 19).

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7. claims: 1-41 (partially)

Method of inhibiting the growth of a cell that expresses a protein having at least 80% amino acid sequence identity to SEQ ID NO: 22 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 21 or by the full-length coding sequence of SEQ ID NO: 21), or wherein the growth of said cell is at least in part dependent upon a growth potentiating effect of a protein having at least 80% amino acid sequence identity to SEQ ID NO: 22 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 21 or by the full-length coding sequence of SEQ ID NO: 21), said method comprising contacting said cell with an antibody, oligopeptide, or organic molecule to said protein; method of treating or preventing a cell proliferative disorder associated with increased expression or activity of a protein having at least 80% amino acid identity to SEQ ID NO: 22 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 21 or by the full-length coding sequence of SEQ ID NO: 21).

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

8. claims: 1-41 (partially)

Method of inhibiting the growth of a cell that expresses a protein having at least 80% amino acid sequence identity to SEQ ID NO: 49 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 48 or by the full-length coding sequence of SEQ ID NO: 48), or wherein the growth of said cell is at least in part dependent upon a growth potentiating effect of a protein having at least 80% amino acid sequence identity to SEQ ID NO: 49 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 48 or by the full-length coding sequence of SEQ ID NO: 48), said method comprising contacting said cell with an antibody, oligopeptide, or organic molecule to said protein; method of treating or preventing a cell proliferative disorder associated with increased expression or activity of a protein having at least 80% amino acid identity to SEQ ID NO: 49 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 48 or by the full-length coding sequence of SEQ ID NO: 48).

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9. claims: 1-41 (partially)

Method of inhibiting the growth of a cell that expresses a protein having at least 80% amino acid sequence identity to SEQ ID NO: 51 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 50 or by the full-length coding sequence of SEQ ID NO: 50), or wherein the growth of said cell is at least in part dependent upon a growth potentiating effect of a protein having at least 80% amino acid sequence identity to SEQ ID NO: 51 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 50 or by the full-length coding sequence of SEQ ID NO: 50), said method comprising contacting said cell with an antibody, oligopeptide, or organic molecule to said protein; method of treating or preventing a cell proliferative disorder associated with increased expression or activity of a protein having at least 80% amino acid identity to SEQ ID NO: 51 (or lacking its associated signal peptide, or an extracellular domain of said polypeptide with or lacking its associated signal peptide, or encoded by the nucleotide sequence of SEQ ID NO: 50 or by the full-length coding sequence of SEQ ID NO: 50).

INTERNATIONAL SEARCH REPORT

Inte[illegible]l Application No
PCT/US2004/038262

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0012130 A	09-03-2000	WO 0012130 A1	09-03-2000
WO 2004054615 A	01-07-2004	AU 2003287131 A1 WO 2004054615 A1	09-07-2004 01-07-2004