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(54) Title: AGENTS THAT MODULATE IMMUNE CELL ACTIVATION AND METHODS OF USE THEREOF

(57) **Abstract:** Disclosed are methods for identifying an agent that modulates an immune response. One such method comprises screening for agents which inhibit the interaction between a PD-1 ligand and a PD-1 polypeptide, and determining whether the agents inhibit the interaction between a PD-1 ligand and a B7 polypeptide, to identify an agent that inhibits PD-1 ligand and PD-1 polypeptide interaction, while not inhibiting the interaction between a PD-1 ligand and a B7 polypeptide, as an agent that modulates an immune response. Another such method comprises screening for agents which inhibit the interaction between a PD-1 ligand and a B7 polypeptide, and determining whether the agents inhibit the interaction between a PD-1 ligand and a PD-1 polypeptide, to identify an agent that inhibits the PD-1 ligand and B7 polypeptide interaction, which does not inhibit the interaction between a PD-1 ligand and a PD-1 polypeptide, as an agent that modulates the immune response. Further disclosed is a method for inhibiting the interaction between a B7 polypeptide and a PD-1 ligand, the method comprising contacting an immune cell bearing a PD-1 ligand, or an immune cell bearing a B7 polypeptide, with an agent that inhibits the interaction between the PD-1 ligand and the B7 polypeptide. Such agents may be an anti- PD-1 ligand antibody or a small molecule. Also disclosed is a method for modulating an immune response. The method comprises contacting an immune cell bearing the PD-1 ligand, or an immune cell bearing the PD-1 polypeptide, with an agent that inhibits interactions between the PD-1 ligand and the PD-1 polypeptide, without inhibiting interactions between the PD-1 ligand and a B7 polypeptide, to thereby modulate an immune response. The agent may be an anti-PD-1 ligand antibody or a small molecule.

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A. CLASSIFICATION OF SUBJECT MATTER

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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)

U.S. : 435/7.2

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 practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2002/0110836 A1 (FREEMAN et al.) 15 August 2002 (15.08.2002), see section 0205; Examples 8-10.	1-14
Y	US 2002/0164600 A1 (FREEMAN et al.) 7 November 2002 (07.11.2002), see sections 0309, 0334; claims 25-28, 27-40.	1-14

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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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

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