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(54)	Title	MARKERS OF ACUTE MYELOID LEUKEMIA STEM CELLS
(56)	References Cited:	US-A1- 2007 287 163 US-B2- 6 733 743 US-B1- 6 491 917 EP-A1- 2 111 869 US-A1- 2004 213 792 RAVINDRA MAJETI ET AL: "CD47 Is an Adverse Prognostic Factor and Therapeutic Antibody Target on Human Acute Myeloid Leukemia Stem Cells", CELL, vol. 138, no. 2, 1 July 2009 (2009-07-01), pages 286-299, XP055277135, US ISSN: 0092-8674, DOI: 10.1016/j.cell.2009.05.045

YOSHIKANE KIKUSHIGE ET AL: "TIM-3 Is a Promising Target to Selectively Kill Acute Myeloid Leukemia Stem Cells", CELL STEM CELL, CELL PRESS, US, vol. 7, no. 6, 6 October 2010 (2010-10-06) , pages 708-717, XP028184581, ISSN: 1934-5909, DOI: 10.1016/J.STEM.2010.11.014 [retrieved on 2010-11-17]

JOSÉ IGNACIO MARTIN-SUBERO ET AL: "Amplification of ERBB2, RARA, and TOP2A genes in a myelodysplastic syndrome transforming to acute myeloid leukemia", CANCER GENETICS AND CYTOGENETICS., vol. 127, no. 2, 1 June 2001 (2001-06-01), pages 174-176, XP055405588, US ISSN: 0165-4608, DOI: 10.1016/S0165-4608(00)00431-3

HOSEN N ET AL: "CD96 is a leukemic stem cell-specific marker in human acute myeloid leukemia", PNAS., vol. 104, no. 26, 26 June 2007 (2007-06-26), pages 11008-11013, XP008109009, DOI: 10.1073/PNAS.0704271104

M. JAN ET AL: "Prospective separation of normal and leukemic stem cells based on differential expression of TIM3, a human acute myeloid leukemia stem cell marker", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES, vol. 108, no. 12, 7 March 2011 (2011-03-07), pages 5009-5014, XP055029836, ISSN: 0027-8424, DOI: 10.1073/pnas.1100551108

JAISWAL SIDDHARTHA ET AL: "CD47 Is Upregulated on Circulating Hematopoietic Stem Cells and Leukemia Cells to Avoid Phagocytosis", CELL, CELL PRESS, US, vol. 138, no. 2, 1 July 2009 (2009-07-01), pages 271-285, XP009160236, ISSN: 0092-8674, DOI: 10.1016/J.CELL.2009.05.046

CLARKE MICHAEL F ET AL: "Cancer stem cells--perspectives on current status and future directions: AACR Workshop on cancer stem cells", CANCER RESEARCH, AACR, US PHILADELPHIA, PA, vol. 66, no. 19, 1 October 2006 (2006-10-01), pages 9339-9344, XP002580692, ISSN: 1538-7445

JAMIESON C ET AL: "Increased expression of CD47 is a constant marker in mouse and human myeloid leukemias", BLOOD, AMERICAN SOCIETY OF HEMATOLOGY, US, vol. 106, 1 January 2005 (2005-01-01), page 911A, XP008138745, ISSN: 0006-4971

Enclosed is a translation of the patent claims in Norwegian. Please note that as per the Norwegian Patents Acts, section 66i the patent will receive protection in Norway only as far as there is agreement between the translation and the language of the application/patent granted at the EPO. In matters concerning the validity of the patent, language of the application/patent granted at the EPO will be used as the basis for the decision. The patent documents published by the EPO are available through Espacenet (<http://worldwide.espacenet.com>) or via the search engine on our website here: <https://search.patentstyret.no/>

Krav

1. Monoklonalt antistoff rettet mot humant CD47 som blokkerer interaksjonen mellom humant CD47 og SIRP α , for anvendelse i behandling av human akutt myeloid leukemi (AML) ved å stimulere fagocytose av AML leukemiske stamceller (LSC) av makrofager,
5 hvor antistoffet rettet mot humant CD47 blir anvendt i kombinasjon med ett eller flere ytterligere monoklonale antistoffer rettet mot en eller flere av de følgende markører: CD96, CD97, CD99, CD180, PTHR2, HAVCR2, CD123, CD44 og CD33.
- 10 2. Monoklonalt antistoff rettet mot humant CD47 for anvendelse ifølge krav 1, hvor de monoklonale antistoffene er humane eller humaniserte antistoffer.