

Title (en)

ANTIBODIES AS T CELL RECEPTOR MIMICS, METHODS OF PRODUCTION AND USES THEREOF

Title (de)

ANTIKÖRPER ALS T-ZELL-REZEPTOR-MIMICS, HERSTELLUNGSVERFAHREN UND IHRE VERWENDUNGEN

Title (fr)

ANTICORPS UTILISÉS COMME MIMÉTIQUES DE RÉCEPTEURS DE LYMPHOCYTES T, LEURS MÉTHODES DE PRODUCTION ET LEURS APPLICATIONS

Publication

EP 1933864 A4 20091216 (EN)

Application

EP 06814164 A 20060907

Priority

- US 2006034547 W 20060907
- US 71462105 P 20050907
- US 75154205 P 20051219
- US 75273705 P 20051220
- US 83827606 P 20060817

Abstract (en)

[origin: WO2007030451A2] The present invention relates to a methodology of producing antibodies that recognize peptides associated with a tumorigenic or disease state, wherein the peptides are displayed in the context of HLA molecules. These antibodies will mimic the specificity of a T cell receptor (TCR) but will have higher binding affinity such that the molecules may be used as therapeutic, diagnostic and research reagents. The method of producing a T-cell receptor mimic of the present invention includes identifying a peptide of interest, wherein the peptide of interest is capable of being presented by an MHC molecule. Then, an immunogen comprising at least one peptide/MHC complex is formed, wherein the peptide of the peptide/MHC complex is the peptide of interest. An effective amount of the immunogen is then administered to a host for eliciting an immune response, and serum collected from the host is assayed to determine if desired antibodies that recognize a three-dimensional presentation of the peptide in the binding groove of the MHC molecule are being produced. The desired antibodies can differentiate the peptide/MHC complex from the MHC molecule alone, the peptide alone, and a complex of MHC and irrelevant peptide. Finally, the desired antibodies are isolated.

IPC 8 full level

A61B 5/055 (2006.01); **A61K 39/00** (2006.01); **C07H 21/02** (2006.01); **C07K 5/10** (2006.01); **C07K 16/00** (2006.01); **C07K 16/26** (2006.01); **C07K 16/28** (2006.01); **C07K 16/30** (2006.01); **C07K 16/32** (2006.01); **G01N 33/574** (2006.01)

CPC (source: EP)

C07K 14/70539 (2013.01); **C07K 16/00** (2013.01); **C07K 16/26** (2013.01); **C07K 16/2833** (2013.01); **C07K 16/30** (2013.01); **C07K 16/32** (2013.01); **C07K 2317/32** (2013.01); **C07K 2317/34** (2013.01); **C07K 2317/73** (2013.01); **C07K 2317/732** (2013.01); **C07K 2317/734** (2013.01); **C07K 2317/92** (2013.01)

Citation (search report)

- [XY] WO 0214870 A2 20020221 - AKZO NOBEL NV [NL], et al
- [PX] WO 2005116072 A2 20051208 - WEIDANZ JON A [US], et al
- [Y] WO 03095486 A1 20031120 - PF MEDICAMENT [FR], et al
- [XY] REAY P A ET AL: "Determination of the relationship between T cell responsiveness and the number of MHC-peptide complexes using specific monoclonal antibodies", JOURNAL OF IMMUNOLOGY, AMERICAN ASSOCIATION OF IMMUNOLOGISTS, US, vol. 164, no. 11, 1 June 2000 (2000-06-01), pages 5626 - 5634, XP002366691, ISSN: 0022-1767
- [XY] AHARONI R ET AL: "Immunomodulation of experimental allergic encephalomyelitis by antibodies to the antigen-Ia complex", NATURE, NATURE PUBLISHING GROUP, LONDON, UK, vol. 351, no. 6322, 9 May 1991 (1991-05-09), pages 147 - 150, XP002514757, ISSN: 0028-0836
- [XY] PORGADOR A ET AL: "LOCALIZATION, QUANTITATION, AND IN SITU DETECTION OF SPECIFIC PEPTIDE-MHC CLASS I COMPLEXES USING A MONOClonAL ANNTIBODY", IMMUNITY, CELL PRESS, US, vol. 6, no. 6, 1 June 1997 (1997-06-01), pages 715 - 726, XP000991374, ISSN: 1074-7613
- [XY] REITER Y ET AL: "peptide-specific killing of antigen-presenting cells by a recombinant antibody-toxin fusion protein targeted to major histocompatibility complex/peptide class I complexes with T cell receptor-like specificity", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE, WASHINGTON, DC, US, vol. 94, 1 April 1997 (1997-04-01), pages 4631 - 4636, XP002967291, ISSN: 0027-8424
- [PX] WITTMAN VAUGHAN P ET AL: "Antibody targeting to a class I MHC-peptide epitope promotes tumor cell death", JOURNAL OF IMMUNOLOGY, AMERICAN ASSOCIATION OF IMMUNOLOGISTS, US, vol. 177, no. 6, 1 September 2006 (2006-09-01), pages 4187 - 4195, XP002514758, ISSN: 0022-1767
- [Y] DANGLES V ET AL: "Tumor-associated antigen human chorionic gonadotropin beta contains numerous antigenic determinants recognized by in vitro-induced CD8+ and CD4+ T lymphocytes", CANCER IMMUNOLOGY AND IMMUNOTHERAPY, SPRINGER-VERLAG, BERLIN, DE, vol. 50, no. 12, 1 February 2002 (2002-02-01), pages 673 - 681, XP002236556, ISSN: 0340-7004
- [T] NEETHLING F A ET AL: "Assessing vaccine potency using TCRmimic antibodies", VACCINE, BUTTERWORTH SCIENTIFIC. GUILDFORD, GB, vol. 26, no. 25, 13 June 2008 (2008-06-13), pages 3092 - 3102, XP022710591, ISSN: 0264-410X, [retrieved on 20080225]
- See references of WO 2007030451A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2007030451 A2 20070315; WO 2007030451 A3 20090416; AU 2006289683 A1 20070315; CA 2662798 A1 20070315;
EP 1933864 A2 20080625; EP 1933864 A4 20091216; IL 190014 A0 20080807

DOCDB simple family (application)

US 2006034547 W 20060907; AU 2006289683 A 20060907; CA 2662798 A 20060907; EP 06814164 A 20060907; IL 19001408 A 20080306