

Title (en)

IMMUNOMODULATING COMPOSITIONS, PROCESSES FOR THEIR PRODUCTION AND USES THEREFOR

Title (de)

IMMUNMODULIERENDE ZUSAMMENSETZUNGEN, VERFAHREN ZU DEREN HERSTELLUNG UND VERWENDUNGEN DAFÜR

Title (fr)

COMPOSITIONS D'IMMUNOMODULATION, PROCEDES POUR LES PRODUIRE ET LEURS UTILISATIONS

Publication

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Application

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Abstract (en)

[origin: WO2004015056A2] The present invention discloses compositions and methods for antigen-specific suppression of immune responses, including primed immune responses. In particular, the invention discloses antigen-presenting cells, especially dendritic cells, whose level and/or functional activity of CD40, or its equivalent, is impaired, abrogated or otherwise reduced, and their use for treating and/or preventing unwanted or deleterious immune responses including those that manifest in autoimmune disease, allergy and transplant rejection.

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- [X] WO 0147543 A2 20010705 - KENNEDY RHEUMATOLOGY INST [GB], et al
- [X] MARTIN E ET AL.: "Antigen-specific suppression of a primed immune response by dendritic cells: implications for autoimmune immunotherapy", COMBINED SCIENTIFIC MEETING OF THE NEW ZEALAND RHEUMATOLOGY ASSOCIATION AND THE AUSTRALIAN RHEUMATOLOGY ASSOCIATION WITH THE NEW ZEALAND HEALTH PROFESSIONALS IN RHEUMATOLOGY AND THE RHEUMATOLOGY HEALTH PROFESSIONALS ASSOCIATION OF AUSTRALIA, 26 May 2002 (2002-05-26), Christchurch, New Zealand, XP002347198
- [X] MARTIN E ET AL: "Inhibition of RelB function in dendritic cells induces antigen-specific tolerance in vivo", ANNUAL SCIENTIFIC MEETING OF THE AUSTRALIAN RHEUMATOLOGY ASSOCIATION AND THE RHEUMATOLOGY HEALTH PROFESSIONALS ASSOCIATION, 27 May 2001 (2001-05-27), Adelaide, South Australia, Australia, XP002347199
- [XY] GAO J X ET AL: "CD40-deficient dendritic cells producing interleukin-10, but not interleukin-12, induce T-cell hyporesponsiveness in vitro and prevent acute allograft rejection", IMMUNOLOGY, BLACKWELL SCIENTIFIC PUBLICATIONS, GB, vol. 98, no. 2, October 1999 (1999-10-01), pages 159 - 170, XP000973593, ISSN: 0019-2805
- [XY] HOLLANDER G A ET AL: "Induction of alloantigen-specific tolerance by B cells from CD40-deficient mice", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, vol. 93, no. 10, 1996, pages 4994 - 4998, XP002347200, ISSN: 0027-8424
- [X] O'SULLIVAN B J ET AL: "RelB nuclear translocation regulates B cell MHC molecule, CD40 expression, and antigen-presenting cell function", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, vol. 97, no. 21, 10 October 2000 (2000-10-10), pages 11421 - 11426, XP002347201, ISSN: 0027-8424
- [X] SNAPPER C M ET AL: "B cells lacking RelB are defective in proliferative responses, but undergo normal B cell maturation of Ig secretion and Ig class switching", JOURNAL OF EXPERIMENTAL MEDICINE, vol. 184, no. 4, 1996, pages 1537 - 1541, XP002347202, ISSN: 0022-1007
- [X] LEE J-I ET AL: "Cyclosporin A inhibits the expression of costimulatory molecules on in vitro-generated dendritic cells", TRANSPLANTATION, WILLIAMS AND WILKINS, BALTIMORE, MD, US, vol. 68, no. 9, 15 November 1999 (1999-11-15), pages 1255 - 1263, XP000984802, ISSN: 0041-1337
- [X] ZHOU L ET AL: "Inhibition of the CD40 Pathway of Monocyte Activation by Triazolopyrimidine", CLINICAL IMMUNOLOGY, ACADEMIC PRESS, US, vol. 93, no. 3, December 1999 (1999-12-01), pages 232 - 238, XP002277919, ISSN: 1521-6616
- [PX] MARTIN E ET AL: "Antigen-specific suppression of a primed immune response by dendritic cells mediated by regulatory T cells secreting interleukin-10.", IMMUNITY, vol. 18, no. 1, January 2003 (2003-01-01), pages 155 - 167, XP002347203, ISSN: 1074-7613
- [X] THOMPSON AG ET AL: "Keeping T cells at bay: Inhibition of NFkB in dendritic cells", COMBINED SCIENTIFIC MEETING OF THE NEW ZEALAND RHEUMATOLOGY ASSOCIATION AND THE AUSTRALIAN RHEUMATOLOGY ASSOCIATION WITH THE NEW ZEALAND HEALTH PROFESSIONALS IN RHEUMATOLOGY AND THE RHEUMATOLOGY HEALTH PROFESSIONALS ASSOCIATION OF AUSTRALIA, 26 May 2002 (2002-05-26), Christchurch, New Zealand, XP002372797
- [X] O'SULLIVAN BJ ET AL: "Maturation and function of human dendritic cells can be controlled by RelB", ANNUAL SCIENTIFIC MEETING OF THE AUSTRALIAN RHEUMATOLOGY ASSOCIATION AND THE RHEUMATOLOGY HEALTH PROFESSIONALS ASSOCIATION, 27 May 2001 (2001-05-27), Adelaide, South Australia, Australia, XP002372798
- [X] YOSHIMURA S ET AL: "Role of NFkappaB in antigen presentation and development of regulatory T cells elucidated by treatment of dendritic cells with the proteasome inhibitor PSI", EUROPEAN JOURNAL OF IMMUNOLOGY, WEINHEIM, DE, vol. 31, no. 6, June 2001 (2001-06-01), pages 1883 - 1893, XP002221236, ISSN: 0014-2980
- [X] PENNA G ET AL: "1alpha,25-dihydroxyvitamin D3 inhibits differentiation, maturation, activation and survival of dendritic cells leading to impaired alloreactive T cell activation", JOURNAL OF IMMUNOLOGY, THE WILLIAMS AND WILKINS CO. BALTIMORE, US, vol. 164, 2000, pages 2405 - 2411, XP001026351, ISSN: 0022-1767
- [X] HAAS M ET AL: "Effect of proteasome inhibitors on monocytic IkB-alpha and -beta depletion, NF-kB activation and cytokine production", JOURNAL OF LEUKOCYTE BIOLOGY, FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL, US, vol. 63, no. 3, March 1998 (1998-03-01), pages 395 - 404, XP000857509, ISSN: 0741-5400
- [T] THOMPSON A G ET AL: "T cells signaled by NF-kappaB- dendritic cells are sensitized not anergic to subsequent activation", JOURNAL OF IMMUNOLOGY, vol. 173, no. 3, 1 August 2004 (2004-08-01), pages 1671 - 1680, XP002372799, ISSN: 0022-1767 & INTERNAL MEDICINE JOURNAL, vol. 33, no. Suppl, 2003, pages A5, ISSN: 1444-0903 & INTERNAL MEDICINE JOURNAL., vol. 32, no. Suppl., 2002, pages A3, ISSN: 1444-0903

- See references of WO 2004015056A2

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