Title (en)

MUTATED IL-13 MOLECULES AND THEIR USES

Title (de)

IL-13 MUTANTE UND VERFAHREN DAVON

Title (fr)

MODULATION DE L'ACTIVITE DE IL-13 AU MOYEN DE MOLECULES IL-13 QUI SONT DES ANTAGONISTES OU DES AGONISTES DE IL-13

Publication

EP 1263785 A2 20021211 (EN)

Application

EP 00978539 A 20001110

Priority

- US 0031044 W 20001110
- US 16523699 P 19991111

Abstract (en)

[origin: WO0134645A2] The present invention provides antagonists and agonists of IL-13 activity. The antagonists comprise a mutation in which the glutamic acid at position 13 of the IL-13 molecule is changed to a neutral or a positively charged molecule. The antagonists can be used to reduce or end symptoms in conditions, such as asthma, allergic rhinitis, atopic dermatitis, and hepatic fibrosis in schistosomiasis, in which IL-13 is an initiator, mediator, or enhancer of the abnormal state. Additionally, the antagonists can be used to slow the growth of cells of cancers for which IL-13 is an autocrine growth factor. Such cancers include renal cell carcinoma, Kaposi's sarcoma, and Hodgkin's disease. The agonists comprise mutated IL-13s in which one or more of the residues at positions 112, 110, 109, 92, 69, or 66 are mutated to a neutrally charged residue, or one with a charge opposite to the charge of the residue found at that position in native IL-13, provided that the residue at position 13 of the molecule is not negatively charged. The agonists can be used as more potent agents to provoke an effect provided by IL-13. In particular, the agonists can be used as reagents in the maturation of monocytes into dendritic cells, or to pretreat bone marrow stem cell donors to reduce graft versus host disease in the recipient of the stem cells. Finally, the invention provides IL-13 receptor binding molecules with affinity for the IL-13 receptor at least about 3 times greater than that exhibited by wild-type IL-13. Also provided are methods and compositions for specifically delivering an effector molecule to a tumor cell by chimeric molecules comprising the effector molecule and an IL-13 receptor binding molecule, and pharmaceutical compositions comprising such chimeric molecules.

IPC 1-7

C07K 14/54; A61K 38/20; G01N 33/574; A61P 33/00; A61P 35/00; A61P 37/00

IPC 8 full level

A61P 33/00 (2006.01); **A61P 35/00** (2006.01); **A61P 37/00** (2006.01); **C07K 14/54** (2006.01); A61K 38/00 (2006.01)

CPC (source: EP)

A61P 33/00 (2017.12); **A61P 35/00** (2017.12); **A61P 37/00** (2017.12); **C07K 14/5437** (2013.01); A61K 38/00 (2013.01); Y02A 50/30 (2017.12)

Citation (search report)

See references of WO 0134645A2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

WO 0134645 A2 20010517; **WO 0134645 A3 20020307**; AU 1599301 A 20010606; CA 2404763 A1 20010517; EP 1263785 A2 20021211

DOCDB simple family (application)

US 0031044 W 20001110; AU 1599301 A 20001110; CA 2404763 A 20001110; EP 00978539 A 20001110