

Title (en)

HIGH AFFINITY CXCR4 SELECTIVE BINDING CONJUGATE AND METHOD FOR USING THE SAME

Title (de)

HOCHAFFINES CXCR4-SELEKTIVES BINDUNGSKONJUGAT UND VERFAHREN ZUR VERWENDUNG DAVON

Title (fr)

CONJUGUÉ DE LIAISON SÉLECTIVE À CXCR4 AVEC UNE AFFINITÉ ÉLEVÉE ET SON PROCÉDÉ D'UTILISATION

Publication

**EP 3679053 A4 20211027 (EN)**

Application

**EP 18852912 A 20180217**

Priority

- US 201762554354 P 20170905
- US 2018018530 W 20180217

Abstract (en)

[origin: WO2019050564A1] This disclosure provides a peptide conjugate (PC) that can be used for targeted drug delivery, imaging a patient, or diagnosing a subject for a condition associated with overexpression and/or upregulation of CXCR4, including cancers, HIV infection, and immune disorders. The disclosure provides a high affinity CXCR4 selective binding ligand PC of Formula: P-(L-A)<sub>n</sub> (I) or a pharmaceutically acceptable salt, and PC kits and compositions. The high affinity CXCR4 selective binding ligand peptide conjugate (PC) is useful in diagnosing, treating or imaging a patient. In compound of Formula (I), n is an integer from 1 to the sum of (number of amino acid residues in P and the number of side-chain functional group in the amino acid residue of P); each A is independently a diagnostic agent, a therapeutic agent, or an imaging agent; L is a linker or absent; and P is a high affinity CXCR4 selective binding peptidyl ligand.

IPC 8 full level

**C07K 7/06** (2006.01); **A61K 38/00** (2006.01); **A61K 49/00** (2006.01); **C07K 5/12** (2006.01); **C07K 7/50** (2006.01); **C07K 14/705** (2006.01)

CPC (source: EP KR)

**A61K 31/337** (2013.01 - EP KR); **A61K 38/16** (2013.01 - EP); **A61K 47/64** (2017.08 - EP KR); **A61K 49/0056** (2013.01 - EP KR); **A61K 51/08** (2013.01 - EP KR); **A61P 35/00** (2018.01 - EP KR); **C07K 7/06** (2013.01 - EP KR); **C07K 14/7158** (2013.01 - EP KR)

Citation (search report)

- [I] WO 2008150689 A1 20081211 - LILLY CO ELI [US], et al
- [A] US 2013079292 A1 20130328 - AMODEO PIETRO [IT], et al
- [A] US 2015218219 A1 20150806 - GOMBERT FRANK OTTO [CH], et al
- [I] CN 102626522 A 20120808 - YANJIANG HAN
- [I] WO 2007096662 A2 20070830 - UNIV MUENCHEN TECH [DE], et al
- [A] US 2015050351 A1 20150219 - GONZALEZ LUCIA IRENE [US]
- [A] WO 2015185162 A1 20151210 - TECH UNIVERSITÄT MÜNCHEN [DE]
- [I] PENG SHENG-BIN ET AL: "Identification of LY2510924, a novel cyclic peptide CXCR4 antagonist that exhibits antitumor activities in solid tumor and breast cancer metastatic models", MOLECULAR CANCER THERAPEUTICS, AMERICAN ASSOCIATION FOR CANCER RESEARCH, US, vol. 14, no. 2, 1 February 2015 (2015-02-01), pages 480 - 490, XP002771606, ISSN: 1538-8514, DOI: 10.1158/1535-7163.MCT-14-0850
- [I] YASUSHI YOSHIKAWA ET AL: "Molecular modeling study of cyclic pentapeptide CXCR4 antagonists: New insight into CXCR4FC131 interactions", BIORGANIC & MEDICINAL CHEMISTRY LETTERS, ELSEVIER, AMSTERDAM, NL, vol. 22, no. 6, 31 January 2012 (2012-01-31), pages 2146 - 2150, XP028402827, ISSN: 0960-894X, [retrieved on 20120208], DOI: 10.1016/J.BMCL.2012.01.134
- [A] YAN WANG ET AL: "Potential of CXCR4/CXCL12 Chemokine Axis in Cancer Drug Delivery", CURRENT PHARMACOLOGY REPORTS, vol. 2, no. 1, 4 January 2016 (2016-01-04), pages 1 - 10, XP055747815, DOI: 10.1007/s40495-015-0044-8
- See also references of WO 2019050564A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**WO 2019050564 A1 20190314**; CA 3065086 A1 20190314; CN 111183146 A 20200519; EP 3679053 A1 20200715; EP 3679053 A4 20211027; JP 2020532496 A 20201112; KR 20200043970 A 20200428; KR 20230145543 A 20231017

DOCDB simple family (application)

**US 2018018530 W 20180217**; CA 3065086 A 20180217; CN 201880049498 A 20180217; EP 18852912 A 20180217; JP 2020504380 A 20180217; KR 20207000227 A 20180217; KR 20237034343 A 20180217