Title (en)

ISOTOPICALLY LABELLED SELECTIVE CXCR4 BINDING PEPTIDE CONJUGATE AND METHODS FOR MAKING AND USING THE SAME

Title (de)

ISOTOPENMARKIERTES SELEKTIVES CXCR4-BINDENDES PEPTIDKONJUGAT UND VERFAHREN ZU DESSEN HERSTELLUNG UND VERWENDUNG

Title (fr)

CONJUGUÉ PEPTIDIQUE DE LIAISON SÉLECTIVE À CXCR4 MARQUÉ PAR ISOTOPE ET SES PROCÉDÉS DE FABRICATION ET D'UTILISATION

Publication

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Application

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Abstract (en)

[origin: WO2021150258A1] The present invention provides a selective CXCR4 binding peptide conjugate ("PC"), and a method for using and producing the same. In particular, the selective CXCR4 binding peptide conjugate of the invention comprises a peptide portion that selectively binds to CXCR4 and a medically useful compound, such as an imaging agent, a diagnostic agent, or a therapeutically or pharmaceutically active compound. In one particular embodiment, the selective CXCR4 binding peptide conjugate ("PC") is of the formula: (SEQ ID NO:1) or a pharmaceutically acceptable salt thereof, wherein a, b, AA1, AA2, Ar1, X1, and AA3 are those defined herein. The peptide conjugate of the invention can be used in a variety of medical applications including, but not limited to, a targeted drug delivery or imaging a patient or diagnosing a patient for a disease or a clinical condition associated with overexpression and/or upregulation of CXCR4, such as cancers, HIV infection, and immune disorders. Compositions, kits and methods are also disclosed herein for such uses.

IPC 8 full level

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Citation (search report)

- [IY] WO 2019050564 A1 20190314 - MAINLINE BIOSCIENCES [US]
- [Y] WO 2008150689 A1 20081211 - LILLY CO ELI [US], et al
- [Y] JENS ATZRODT ET AL: "Deuterium- and Tritium-Labelled Compounds: Applications in the Life Sciences", ANGEWANDTE CHEMIE INTERNATIONAL EDITION, VERLAG CHEMIE, HOBOKEN, USA, vol. 57, no. 7, 16 August 2017 (2017-08-16), pages 1758 - 1784, XP072090446, ISSN: 1433-7851, DOI: 10.1002/ANIE.201704146
- [Y] JOSEPH LAU ET AL: "[68 Ga]Ga/[177 Lu]Lu-BL01, a Novel Theranostic Pair for Targeting C-X-C Chemokine Receptor 4", MOLECULAR PHARMACEUTICS, vol. 16, no. 11, 23 September 2019 (2019-09-23), US, pages 4688 - 4695, XP055748853, ISSN: 1543-8384, DOI: 10.1021/acs.molpharmaceut.9b00808
- [Y] ÅBERG OLA ET AL: "18F-labelling of a cyclic pentapeptide inhibitor of the chemokine receptor CXCR4", JOURNAL OF FLUORINE CHEMISTRY, vol. 135, 28 November 2011 (2011-11-28), pages 200 - 206, XP028897524, ISSN: 0022-1139, DOI: 10.1016/J.JFLUCHEM.2011.11.003
- See references of WO 2021150258A1

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