

Title (en)

EXTENDED NATIVE CHEMICAL LIGATION

Title (de)

ERWEITERTE NATIVE CHEMISCHE LIGATION

Title (fr)

LIGATURE CHIMIQUE NATURELLE ETENDUE

Publication

EP 1315738 A4 20060607 (EN)

Application

EP 01968707 A 20010907

Priority

- US 0128172 W 20010907
- US 23133900 P 20000908

Abstract (en)

[origin: WO0220557A1] The invention is directed to methods and compositions for chemical ligation of components comprising a first component having a carboxythioester, and preferable an alpha -carboxythioester, moiety and a second component having an N-substituted, and preferably an N alpha -substituted, 2 or 3 carbon chain alkyl or aryl thiol to give a ligation product having an N-substituted amide bond at the ligation site. The reactants of the invention are chemoselective, and the alkyl or aryl thiol moiety is removable from the ligation product. Removal of the alkyl or aryl thiol gives a native amide bond at the ligation site. The methods and compositions of the invention are particularly useful for ligation of peptides and polypeptides. The ligation system of the invention is applicable to a wide variety of molecules, and thus can be exploited to generate peptides, polypeptides and other amino acid containing polymers having a native amide bond at the ligation site.

IPC 8 full level

C07K 1/00 (2006.01); **C07K 5/04** (2006.01); **C07K 1/04** (2006.01); **C07K 1/08** (2006.01); **C07K 5/06** (2006.01); **C07K 5/068** (2006.01); **C07K 5/078** (2006.01); **C07K 5/087** (2006.01); **C07K 7/04** (2006.01); **C07K 7/06** (2006.01); **C07K 14/00** (2006.01); **C07K 14/505** (2006.01); **C07K 14/80** (2006.01); **C12N 9/02** (2006.01); **A61K 38/00** (2006.01)

CPC (source: EP KR)

C07K 1/113 (2013.01 - KR); **C07K 5/06026** (2013.01 - EP); **C07K 5/06086** (2013.01 - EP); **C07K 5/06147** (2013.01 - EP); **C07K 5/0812** (2013.01 - EP); **C07K 7/06** (2013.01 - EP); **C07K 14/80** (2013.01 - EP)

Citation (search report)

- [X] S.J. BARK: "The ligation of unprotected peptide segments using auxiliary functional groups", PH.D. THESIS, 1997, The Scripps Research Institute - La Jolla, California, pages 1 - 148, XP001246730
- See references of WO 0220557A1

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 0220557 A1 20020314; AU 2001288937 B2 20050428; AU 8893701 A 20020322; BR 0113579 A 20030617; BR 0113623 A 20040622; CA 2412298 A1 20020314; CN 1452632 A 20031029; EP 1315738 A1 20030604; EP 1315738 A4 20060607; ES 2360203 T3 20110601; IL 154015 A0 20030731; JP 2004508383 A 20040318; JP 2008150393 A 20080703; KR 20030061785 A 20030722; MX PA03001450 A 20041213; ZA 200300314 B 20040204; ZA 200300315 B 20040204; ZA 200300659 B 20040305

DOCDB simple family (application)

US 0128172 W 20010907; AU 2001288937 A 20010907; AU 8893701 A 20010907; BR 0113579 A 20010712; BR 0113623 A 20010712; CA 2412298 A 20010907; CN 01815351 A 20010907; EP 01968707 A 20010907; ES 01952657 T 20010712; IL 15401501 A 20010907; JP 2002525177 A 20010907; JP 2008025907 A 20080206; KR 20037002775 A 20030226; MX PA03001450 A 20010907; ZA 200300314 A 20030113; ZA 200300315 A 20030113; ZA 200300659 A 20030124