

Title (en)

OXIDATION AND AMINATION OF SECONDARY ALCOHOLS

Title (de)

OXIDATION UND AMINIERUNG VON SEKUNDÄREN ALKOHOLEN

Title (fr)

OXYDATION ET AMINATION D'ALCOOLS SECONDAIRES

Publication

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Application

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Abstract (en)

[origin: WO2013020839A1] The invention relates to a method comprising the following steps: a) providing a secondary alcohol; b) oxidizing the secondary alcohol by bringing said alcohol into contact with an NAD(P)+-dependent alcohol dehydrogenase; and c) bringing the oxidation product of step a) into contact with a transaminase, wherein the NAD(P)+-dependent alcohol dehydrogenase and/or the transaminase are/is a recombinant or isolated enzyme. The invention further relates to a whole cell catalyst for carrying out the method and to the use of such a whole cell catalyst for oxidizing a secondary alcohol.

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See references of WO 2013020839A1

Citation (examination)

- EDEGGER K ET AL: "Biocatalytic oxidation of sec-alcohols via hydrogen transfer", JOURNAL OF MOLECULAR CATALYSIS A: CHEMICAL, ELSEVIER, AMSTERDAM, NL, vol. 251, no. 1-2, 17 May 2006 (2006-05-17), pages 66 - 70, XP028015270, ISSN: 1381-1169, [retrieved on 20060517], DOI: 10.1016/J.MOLCATA.2006.02.007
- JOERG H SCHRITTWIESER ET AL: "Recent biocatalytic oxidation/reduction cascades", CURRENT OPINION IN CHEMICAL BIOLOGY, vol. 15, no. 2, April 2011 (2011-04-01), pages 249 - 256, XP028187359, ISSN: 1367-5931, [retrieved on 20101111], DOI: 10.1016/J.CBPA.2010.11.010

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