

biphenyl-2,3-diol 1,2-dioxygenase

Cat. No. EXWM-0558

Lot. No. (See product label)

Introduction

Description

Contains Fe²⁺ or Mn²⁺. This enzyme participates in the degradation pathway of biphenyl and PCB (poly chlorinated biphenyls), and catalyses the first ring cleavage step by incorporating two oxygen atoms into the catechol ring formed by EC 1.3.1.56, cis-2,3-dihydrobiphenyl-2,3-diol dehydrogenase. The enzyme from the bacterium Burkholderia xenovorans LB400 can also process catechol, 3-methylcatechol, and 4-methylcatechol, but less efficiently. The enzyme from the carbazole-degrader Pseudomonas resinovorans strain CA10 also accepts 2'-aminobiphenyl-2,3-diol. The enzyme from Ralstonia sp. SBUG 290 can also accept 1,2-dihydroxydibenzofuran and 1,2-dihydroxynaphthalene. The enzyme is strongly inhibited by the substrate. Not identical with EC 1.13.11.2 catechol 2,3-dioxygenase.

Synonyms

2,3-dihydroxybiphenyl dioxygenase; biphenyl-2,3-diol dioxygenase; bphC (gene name); biphenyl-2,3-diol:oxygen 1,2-oxidoreductase (decyclizing)

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 1.13.11.39

CAS No.

103679-58-9

Reaction

biphenyl-2,3-diol + O₂ = 2-hydroxy-6-oxo-6-phenylhexa-2,4-dienoate

Notes

This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage

Store it at +4 °C for short term. For long term storage, store it at -20 °C~-80 °C.