

methanesulfonate monooxygenase

Cat. No. EXWM-0711

Lot. No. (See product label)

Introduction

Description

A flavoprotein. Methanesulfonate is the simplest of the sulfonates and is a substrate for the growth of certain methylotrophic microorganisms. Compared with EC 1.14.14.5, alkanesulfonate monooxygenase, this enzyme has a restricted substrate range that includes only the short-chain aliphatic sulfonates (methanesulfonate to butanesulfonate) and excludes all larger molecules, such as arylsulfonates. The enzyme from the bacterium *Methylosulfonomonas methylovora* is a multicomponent system comprising a hydroxylase, a reductase (MsmD) and a ferredoxin (MsmC). The hydroxylase has both large (MsmA) and small (MsmB) subunits, with each large subunit containing a Rieske-type [2Fe-2S] cluster.

Synonyms

mesylate monooxygenase; mesylate, reduced-FMN:oxygen oxidoreductase; MsmABC; methanesulfonic acid monooxygenase; MSA monooxygenase; MSAMO

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 1.14.13.111

Reaction

methanesulfonate + NADH + H⁺ + O₂ = formaldehyde + NAD⁺ + sulfite + H₂O

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.