

methylxanthine N1-demethylase

Cat. No. EXWM-0776

Lot. No. (See product label)

Introduction

Description

A non-heme iron oxygenase. The enzyme from the bacterium *Pseudomonas putida* shares an NAD(P)H-FMN reductase subunit with EC 1.14.13.179, methylxanthine N3-demethylase, and has a 5-fold higher activity with NADH than with NADPH. Also demethylate 1-methylxanthine with lower efficiency. Forms part of the degradation pathway of methylxanthines.

Synonyms

ndmA (gene name)

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 1.14.13.178

Reaction

(1) caffeine + O₂ + NAD(P)H + H⁺ = theobromine + NAD(P)⁺ + H₂O + formaldehyde; (2) theophylline + O₂ + NAD(P)H + H⁺ = 3-methylxanthine + NAD(P)⁺ + H₂O + formaldehyde; (3) paraxanthine + O₂ + NAD(P)H + H⁺ = 7-methylxanthine + NAD(P)⁺ + H₂O + formaldehyde

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.