Creative Enzymes®

N1-acetylpolyamine oxidase

Cat. No. EXWM-1540

Lot. No. (See product label)

Introduction

Description	The enzyme also catalyses the reaction: N1,N12-diacetylspermine + O2 + H2O = N1-acetylspermidine + 3-acetamamidopropanal + H2O2. No or very weak activity with spermine, or spermidine in absence of aldehydes. In presence of aldehydes the enzyme catalyses the reactions: 1. spermine + O2 + H2O = spermidine + 3-aminopropanal + H2O2, and with weak efficiency 2. spermidine + O2 + H2O = putrescine + 3-aminopropanal + H2O2. A flavoprotein (FAD). This enzyme, encoded by the PAOX gene, is found in mammalian peroxisomes and oxidizes N1-acetylated polyamines at the exo (three-carbon) side of the secondary amine, forming 3-acetamamidopropanal. Since the products of the reactions are deacetylated polyamines, this process is known as polyamine back-conversion. Differs in specificity from EC 1.5.3.14 [polyamine oxidase (propane-1,3-diamine-forming)], EC 1.5.3.15 [N8-acetylspermidine oxidase (propane-1,3-diamine-forming)], EC 1.5.3.16 (spermine oxidase) and EC 1.5.3.17 (non-specific polyamine oxidase).
Synonyms	hPAO-1; PAO (ambiguous); mPAO; hPAO; polyamine oxidase (ambiguous)

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.5.3.13
Reaction	(1) N1-acetylspermidine + O2 + H2O = putrescine + 3-acetamidopropanal + H2O2; (2) N1-acetylspermine + O2 + H2O = spermidine + 3-acetamidopropanal + H2O2
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 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.