Creative Enzymes®

phenylalanine N-monooxygenase

Cat. No. EXWM-0725

Lot. No. (See product label)

Introduction

Description	A heme-thiolate protein (P-450). This enzyme catalyses two successive N-hydroxylations of L-phenylalanine, the first committed steps in the biosynthesis of benzylglucosinolate. The product of the two hydroxylations, N,N-dihydroxy-L-phenylalanine, is extremely labile and dehydrates spontaneously.The dehydrated product is then subject to a decarboxylation that produces the oxime. It is still not known whether the decarboxylation is spontaneous or catalysed by the enzyme. The product, (E)-phenylacetaldoxime, undergoes a spontaneous isomerization to the (Z) form.
Synonyms	phenylalanine N-hydroxylase; CYP79A2

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.14.13.124
Reaction	L-phenylalanine + 2 O2 + 2 NADPH + 2 H+ = (E)-phenylacetaldoxime + 2 NADP+ + CO2 + 3 H2O (overall reaction); (1a) L-phenylalanine + O2 + NADPH + H+ = N-hydroxy-L-phenylalanine + NADP+ + H2O; (1b) N-hydroxy-L-phenylalanine + O2 + NADPH + H+ = N,N-dihydroxy-L-phenylalanine + NADP+ + H2O; (1c) N,N-dihydroxy-L-phenylalanine = (E)-phenylacetaldoxime + CO2 + 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 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.