

## tryptophan N-monooxygenase

Cat. No. EXWM-0726

Lot. No. (See product label)

### Introduction

#### Description

A heme-thiolate protein (P-450). This enzyme catalyses two successive N-hydroxylations of L-tryptophan, the first steps in the biosynthesis of both auxin and the indole alkaloid phytoalexin camalexin. The product of the two hydroxylations, N,N-dihydroxy-L-tryptophan, is extremely labile and dehydrates spontaneously. The dehydrated product is then subject to a decarboxylation that produces an oxime. It is still not known whether the decarboxylation is spontaneous or catalysed by the enzyme.

#### Synonyms

tryptophan N-hydroxylase; CYP79B1; CYP79B2; CYP79B3

### Product Information

#### Form

Liquid or lyophilized powder

#### EC Number

EC 1.14.13.125

#### Reaction

$\text{L-tryptophan} + 2 \text{ O}_2 + 2 \text{ NADPH} + 2 \text{ H}^+ = (\text{E})\text{-indol-3-ylacetaldoxime} + 2 \text{ NADP}^+ + \text{CO}_2 + 3 \text{ H}_2\text{O}$  (overall reaction); (1a)  $\text{L-tryptophan} + \text{O}_2 + \text{NADPH} + \text{H}^+ = \text{N-hydroxy-L-tryptophan} + \text{NADP}^+ + \text{H}_2\text{O}$ ; (1b)  $\text{N-hydroxy-L-tryptophan} + \text{O}_2 + \text{NADPH} + \text{H}^+ = \text{N,N-dihydroxy-L-tryptophan} + \text{NADP}^+ + \text{H}_2\text{O}$ ; (1c)  $\text{N,N-dihydroxy-L-tryptophan} = (\text{E})\text{-indol-3-ylacetaldoxime} + \text{CO}_2 + \text{H}_2\text{O}$

#### 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.