Creative Enzymes®

heme oxygenase (biliverdin-producing, ferredoxin)

Cat. No. EXWM-0945

Lot. No. (See product label)

Introduction

Description	The enzyme, found in plants, algae, and cyanobacteria, participates in the biosynthesis of phytochromobilin and phytobilins. The terminal oxygen atoms that are incorporated into the carbonyl groups of pyrrole rings A and B of biliverdin are derived from two separate oxygen molecules. The third oxygen molecule provides the oxygen atom that converts the α-carbon to CO. Unlike this enzyme, which uses ferredoxin as its electron donor, the electron source for the related mammalian enzyme (EC 1.14.14.18) is EC 1.6.2.4, NADPH-hemoprotein reductase.
Synonyms	HO1 (gene name); HY1 (gene name); HO3 (gene name); HO4 (gene name); pbsA1 (gene name)

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.14.15.20
Reaction	protoheme + 6 reduced ferredoxin [iron-sulfur] cluster + 3 O2 + 6 H+ = biliverdin + Fe2+ + CO + 6 oxidized ferredoxin [iron-sulfur] cluster + 3 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 ℃.