Creative Enzymes®

porphobilinogen synthase

Cat. No. EXWM-5016

Lot. No. (See product label)

Introduction

Description	The enzyme catalyses the asymmetric condensation and cyclization of two 5-aminolevulinate molecules, which is the first common step in the biosynthesis of tetrapyrrole pigments such as porphyrin, chlorophyll, vitamin B12, siroheme, phycobilin, and cofactor F430. The enzyme is widespread, being essential in organisms that carry out respiration, photosynthesis, or methanogenesis. The enzymes from most organisms utilize metal ions (Zn2+, Mg2+, K+, and Na+) as cofactors that reside at multiple sites, including the active site and allosteric sites. Enzymes from archaea, yeast, and metazoa (including human) contain Zn2+ at the active site. In humans, the enzyme is a primary target for the environmental toxin Pb. The enzymes from some organisms utilize a dynamic equilibrium between architecturally distinct multimeric assemblies as a means for allosteric regulation.
Synonyms	aminolevulinate dehydratase; Δ-aminolevulinate dehydratase; Δ-aminolevulinic acid dehydrase; Δ-aminolevulinic acid dehydratase; aminolevulinic dehydratase; Δ-aminolevulinic dehydratase; 5-levulinic acid dehydratase; 5-aminolevulinate hydro-lyase (adding 5-aminolevulinate and cyclizing); hemB (gene name)

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 4.2.1.24
CAS No.	9036-37-7
Reaction	2 5-aminolevulinate = porphobilinogen + 2 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 ℃.