Creative Enzymes®

5,6-dimethylbenzimidazole synthase

Cat. No. EXWM-0599

Lot. No. (See product label)

Introduction

Description	The enzyme catalyses a complex oxygen-dependent conversion of reduced flavin mononucleotide to form 5,6-dimethylbenzimidazole, the lower ligand of vitamin B12. This conversion involves many sequential steps in two distinct stages, and an alloxan intermediate that acts as a proton donor, a proton acceptor, and a hydride acceptor. The C-2 of 5,6-dimethylbenzimidazole is derived from C-1' of the ribityl group of FMNH2 and 2-H from the ribityl 1'-pro-S hydrogen. While D-erythrose 4-phosphate has been shown to be one of the byproducts, the nature of the other product(s) has not been verified yet.
Synonyms	BluB

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.13.11.79
Reaction	FMNH2 + O2 = 5,6-dimethylbenzimidazole + D-erythrose 4-phosphate + other product(s)
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 ℃.