Creative Enzymes®

cobaltochelatase

Cat. No. EXWM-5828

Lot. No. (See product label)

Introduction

Description This enzyme, which forms part of the aerobic cobalamin biosynthesis pathway, is a type I chelatase, being heterotrimeric and ATP-dependent. It comprises two components, one of which corresponds to CobN and the other is composed of two polypeptides, specified by cobS and cobT in Pseudomonas denitrificans, and named CobST. Hydrogenobyrinic acid is a very poor substrate. ATP can be replaced by dATP or CTP but the reaction proceeds more slowly. CobN exhibits a high affinity for hydrogenobyrinic acid a,c-diamide. The oligomeric protein CobST possesses at least one sulfhydryl group that is essential for ATP-binding. Once the Co2+ is inserted, the next step in the pathway ensures that the cobalt is ligated securely by reducing Co(II) to Co(I). This step is carried out by EC 1.16.8.1, cob(II)yrinic acid a,c-diamide reductase.

Synonyms hydrogenobyrinic acid a,c-diamide cobaltochelatase; CobNST; CobNCobST

Product Information

Form Liquid or lyophilized powder

EC Number EC 6.6.1.2

CAS No. 81295-49-0

Reaction ATP + hydrogenobyrinic acid a,c-diamide + Co2+ + H2O = ADP + phosphate + cob(II)yrinic acid a,c-diamide + H+

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 ℃.