

## uroporphyrinogen-III C-methyltransferase

Cat. No. EXWM-1705

Lot. No. (See product label)

### Introduction

**Description** This enzyme catalyses two sequential methylation reactions, the first forming precorrin-1 and the second leading to the formation of precorrin-2. It is the first of three steps leading to the formation of siroheme from uroporphyrinogen III. The second step involves an NAD<sup>+</sup>-dependent dehydrogenation to form sirohydrochlorin from precorrin-2 (EC 1.3.1.76, precorrin-2 dehydrogenase) and the third step involves the chelation of Fe<sup>2+</sup> to sirohydrochlorin to form siroheme (EC 4.99.1.4, sirohydrochlorin ferrochelatase). In *Saccharomyces cerevisiae*, the last two steps are carried out by a single bifunctional enzyme, Met8p. In some bacteria, steps 1-3 are catalysed by a single multifunctional protein called CysG, whereas in *Bacillus megaterium*, three separate enzymes carry out each of the steps, with SirA being responsible for the above reaction. Also involved in the biosynthesis of cobalamin.

**Synonyms** uroporphyrinogen methyltransferase; uroporphyrinogen-III methyltransferase; adenosylmethionine-uroporphyrinogen III methyltransferase; S-adenosyl-L-methionine-dependent uroporphyrinogen III methylase; uroporphyrinogen-III methylase; SirA; CysG; CobA [ambiguous - see EC 2.5.1.17] SUMT; uroporphyrin-III C-methyltransferase (incorrect); S-adenosyl-L-methionine:uroporphyrin-III C-methyltransferase (incorrect)

### Product Information

**Form** Liquid or lyophilized powder

**EC Number** EC 2.1.1.107

**CAS No.** 125752-76-3

**Reaction** 2 S-adenosyl-L-methionine + uroporphyrinogen III = 2 S-adenosyl-L-homocysteine + precorrin-2 (overall reaction); (1a) S-adenosyl-L-methionine + uroporphyrinogen III = S-adenosyl-L-homocysteine + precorrin-1; (1b) S-adenosyl-L-methionine + precorrin-1 = S-adenosyl-L-homocysteine + precorrin-2

**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.