

## methanogen homoaconitase

Cat. No. EXWM-4954

Lot. No. (See product label)

### Introduction

#### Description

This enzyme catalyses several reactions in the pathway of coenzyme-B biosynthesis in methanogenic archaea. Requires a [4Fe-4S] cluster for activity. In contrast to EC 4.2.1.36, homoaconitate hydratase, this enzyme can catalyse both the dehydration of (R)-homocitrate to form cis-homoaconitate and the subsequent hydration reaction that forms homoisocitrate. In addition to cis-homoaconitate, the enzyme can also catalyse the hydration of the physiological substrates dihomocitrate and trihomocitrate as well as the non-physiological substrate tetrahomocitrate. cis-Aconitate and threo-DL-isocitrate cannot act as substrates, and (S)-homocitrate and trans-homoaconitate act as inhibitors of the enzyme.

#### Synonyms

methanogen HACN

### Product Information

#### Form

Liquid or lyophilized powder

#### EC Number

EC 4.2.1.114

#### Reaction

(R)-2-hydroxybutane-1,2,4-tricarboxylate = (1R,2S)-1-hydroxybutane-1,2,4-tricarboxylate (overall reaction); (1a) (R)-2-hydroxybutane-1,2,4-tricarboxylate = (Z)-but-1-ene-1,2,4-tricarboxylate + H<sub>2</sub>O; (1b) (Z)-but-1-ene-1,2,4-tricarboxylate + H<sub>2</sub>O = (1R,2S)-1-hydroxybutane-1,2,4-tricarboxylate

#### 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.