

## dibenzothiophene monooxygenase

Cat. No. EXWM-0918

Lot. No. (See product label)

### Introduction

#### Description

This bacterial enzyme catalyses the first two steps in the desulfurization pathway of dibenzothiophenes, the oxidation of dibenzothiophene into dibenzothiophene sulfone via dibenzothiophene-5-oxide. The enzyme forms a two-component system with a dedicated NADH-dependent FMN reductase (EC 1.5.1.42) encoded by the dszD gene, which also interacts with EC 1.14.14.22, dibenzothiophene sulfone monooxygenase.

#### Synonyms

dszC (gene name)

### Product Information

#### Form

Liquid or lyophilized powder

#### EC Number

EC 1.14.14.21

#### Reaction

dibenzothiophene + 2 FMNH<sub>2</sub> + 2 O<sub>2</sub> = dibenzothiophene-5,5-dioxide + 2 FMN + 2 H<sub>2</sub>O (overall reaction); (1a) dibenzothiophene + FMNH<sub>2</sub> + O<sub>2</sub> = dibenzothiophene-5-oxide + FMN + H<sub>2</sub>O; (1b) dibenzothiophene-5-oxide + FMNH<sub>2</sub> + O<sub>2</sub> = dibenzothiophene-5,5-dioxide + FMN + H<sub>2</sub>O

#### 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.