

## (R)-6-hydroxynicotine oxidase

Cat. No. EXWM-1553

Lot. No. (See product label)

### Introduction

**Description** A flavoprotein (FAD). The enzyme, which participates in nicotine degradation, is specific for (R) isomer of 6-hydroxynicotine, derived from the uncommon (R)-nicotine. The bacterium *Arthrobacter nicotinovorans*, in which this enzyme was originally discovered, has a different enzyme that catalyses a similar reaction with the (S)-isomer (cf. EC 1.5.3.5, (S)-6-hydroxynicotine oxidase).

**Synonyms** D-6-hydroxynicotine oxidase; 6-hydroxy-D-nicotine oxidase

### Product Information

**Form** Liquid or lyophilized powder

**EC Number** EC 1.5.3.6

**CAS No.** 37233-46-8

**Reaction** (R)-6-hydroxynicotine + H<sub>2</sub>O + O<sub>2</sub> = 1-(6-hydroxypyridin-3-yl)-4-(methylamino)butan-1-one + H<sub>2</sub>O<sub>2</sub> (overall reaction); (1a) (R)-6-hydroxynicotine + O<sub>2</sub> = 5-(N-methyl-4,5-dihydro-1H-pyrrol-2-yl)pyridin-2-ol + H<sub>2</sub>O<sub>2</sub>; (1b) 5-(N-methyl-4,5-dihydro-1H-pyrrol-2-yl)pyridin-2-ol + H<sub>2</sub>O = 1-(6-hydroxypyridin-3-yl)-4-(methylamino)butan-1-one (spontaneous)

**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.