

nicotine blue oxidoreductase

Cat. No. EXWM-0241

Lot. No. (See product label)

Introduction

Description

The enzyme, characterized from the nicotine degrading bacterium *Arthrobacter nicotinovorans*, catalyses the reduction of "nicotine blue" to its hydroquinone form (the opposite direction from that shown). Nicotine blue is the name given to the compound formed by the autocatalytic condensation of two molecules of 2,3,6-trihydroxypyridine, an intermediate in the nicotine degradation pathway. The main role of the enzyme may be to prevent the intracellular formation of nicotine blue semiquinone radicals, which by redox cycling would lead to the formation of toxic reactive oxygen species. The enzyme possesses a slight preference for NADH over NADPH.

Synonyms

nboR (gene name)

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 1.1.1.328

Reaction

$3,3'\text{-bipyridine-2,2',5,5',6,6'\text{-hexol}} + \text{NAD(P)}^+ = (\text{E})\text{-2,2',5,5'\text{-tetrahydroxy-6H,6'H-[3,3'\text{-bipyridinylidene]-6,6'\text{-dione}}} + \text{NAD(P)H} + \text{H}^+$

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 °C for short term. For long term storage, store it at -20 °C~-80 °C.