Creative Enzymes®

ADP-dependent NAD(P)H-hydrate dehydratase

Cat. No. EXWM-4977

Lot. No. (See product label)

Introduction

Description Acts equally well on hydrated NADH and hydrated NADPH. NAD(P)H spontaneously hydrates to both the (6S)- and (6R)- isomers. The enzyme from bacteria consists of two domains, one of which acts as an NAD(P)H-hydrate epimerase that interconverts the two isomers to a 60:40 ratio (cf. EC 5.1.99.6), while the other catalyses the dehydration. Hence the enzyme can restore the complete mixture of isomers into NAD(P)H. The enzyme has no activity with ATP, contrary to the enzyme from eukaryotes (cf. EC 4.2.1.93, ATP-dependent NAD(P)H-hydrate dehydratase).

Synonyms (6S)-β-6-hydroxy-1,4,5,6-tetrahydronicotinamide-adenine-dinucleotide hydro-lyase(ADP-hydrolysing); (6S)-6-β-hydroxy-1,4,5,6-tetrahydronicotinamide-adenine-dinucleotide hydro-lyase (ADP-hydrolysing; NADH-forming)

Product Information

Form Liquid or lyophilized powder

EC Number EC 4.2.1.136

Reaction (1) ADP + (6S)-6β-hydroxy-1,4,5,6-tetrahydronicotinamide-adenine dinucleotide = AMP + phosphate + NADH; (2) ADP + (6S)-6β-hydroxy-1,4,5,6-tetrahydronicotinamide-adenine dinucleotide phosphate = AMP + phosphate + NADPH

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