L-Glutamate Dehydrogenase (Crude Enzyme)

Cat. No. NATE-1802

Lot. No. (See product label)

Introduction

Description Glutamate dehydrogenase (GLDH) is an enzyme, present in most microbes and the mitochondria of eukaryotes, as are some of the other enzymes required for urea synthesis, that converts glutamate to α-ketoglutarate, and vice versa. In animals, the produced ammonia is usually used as a substrate in theurea cycle. Typically, the α-ketoglutarate to glutamate reaction does not occur in mammals, as glutamate dehydrogenase equilibrium favours the production of ammonia and α-ketoglutarate. Glutamate dehydrogenase also has a very low affinity for ammonia (high Michaelis constant of about 1 mM), and therefore toxic levels of ammonia would have to be present in the body for the reverse reaction to proceed (that is, α-ketoglutarate and ammonia to glutamate and NAD(P) +). In bacteria, the ammonia is assimilated to amino acids via glutamate and aminotransferases. In plants, the enzyme can work in either direction depending on environment and stress. Transgenic plants expressing microbial GLDHs are improved in tolerance to herbicide, water deficit, and pathogen infections. They are more nutritionally valuable. This product with the indicated enzyme activity was briefly purified from engineered E. coli.

Applications biotechnology; diagnostics; medicine; molecular biology; analysis; agriculture; diagnostics

Synonyms glutamic dehydrogenase; glutamate dehydrogenase (NAD); glutamate oxidoreductase; glutamic acid dehydrogenase; L-glutamate dehydrogenase; NAD-dependent glutamate dehydrogenase; NAD-dependent glutamic dehydrogenase; NAD-glutamate dehydrogenase; NAD-linked glutamate dehydrogenase; NAD-linked glutamic dehydrogenase; NAD-specific glutamic dehydrogenase; NAD-specific glutamate dehydrogenase; NAD:glutamate oxidoreductase; NADH-linked glutamate dehydrogenase

Product Information

Source E. coli

Appearance Clear to translucent yellow solution

EC Number EC 1.4.1.2

CAS No. 9001-46-1

Activity Undetermined

Reaction L-glutamate + H 2 O + NAD + = 2-oxoglutarate + NH 3 + NADH + H +

Notes Since this product needs to be freshly prepared, it will take about 2 weeks after you confirm the order. Each time of the freeze-thawing may cause partial inactivation. Therefore, it should be dispensed as required and stored at -20 ° C or lower. With the preservation of the extension of time, the enzyme activity will decline to a certain extent, so the product should be used as soon as possible. This product may have turbidity or precipitation in the production and preservation process, it can be mixed after melting and will not affect the normal use. This product is limited to scientific research use, shall not be used for clinical diagnosis or treatment, shall not be used for food or medicine, shall not be stored in ordinary residential. For your safety and health, please wear an experimental suit and wear disposable gloves.

Usage and Packaging

Package 100ml

Package 100ml

Storage and Shipping Information

Storage at -20 °C or lower, for at least 1 month.