User guide

AE0005_UG_EN_V2302

Glutamate dehydrogenase (EC 1.4.1.4), *Escherichia coli*

Catalogue number AE00051 Presentation 3300 U (10 mL)

Description

Recombinant glutamate dehydrogenase (EC 1.4.1.4) is purified from a modified *E. coli* strain. Glutamate dehydrogenase 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 reversibly glutamate to α -ketoglutarate. In animals, the produced ammonia is, however, usually bled off to the urea cycle. In bacteria the ammonia is assimilated to amino acids via glutamate and amidotransferases. In plants, the enzyme can work in either direction depending on environment and stress. The enzyme is provided in 2.5 M lithium sulphate. Swirl to mix the enzyme suspension immediately prior to use.

Purity

Glutamate dehydrogenase has been determined to be >95% pure, according to SDS polyacrylamide gel electrophoresis (PAGE) followed by Coomassie Blue staining (Figure 1).



Figure 1. SDS-PAGE analysis of *E. coli* Glutamate dehydrogenase. Electrophoresis was performed using a 12% polyacrylamide gel. Lane M, molecular weight marker; Lane 1, purified Glutamate dehydrogenase (48.6 kDa).

Storage temperature

Glutamate dehydrogenase should be stored at 2 °C to 8 °C.

Temperature and pH optimum

The optimum pH and temperature are 7.5 and 25 °C, respectively.

Activity

330 U/ml

Unit Definition

One Unit is defined as the amount of enzyme required to produce one micromole of NADP⁺ from NADPH at 25 °C and pH 7.5.

For life science research only. Not for use in diagnostic procedures.

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