Native Bovine Glutamate Dehydrogenase

Cat. No. DIA-146

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 the urea 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.
Synonyms	glutamate dehydrogenase [NAD(P)+]; EC 1.4.1.3; GLDH; glutamic dehydrogenase; glutamate dehydrogenase [NAD(P)]; L-glutamate: NAD(P)+ oxidoreductase (deaminating); L-GLDH; Glutamate Dehydrogenase from bovine liver; L-Glutamic Dehydrogenase; glutamate dehydrogenase

Product Information

Species	Bovine
Source	Bovine liver
Appearance	White/off white powder
Form	Freeze dried powder
EC Number	EC 1.4.1.3
CAS No.	9001-46-1
Molecular Weight	260 kDa (gel)
Activity	> 500U /mg protein
Isoelectric point	pH5.6
pH Stability	5.0~11.0
Optimum pH	8.5(α-KG→L-Glu)
Thermal stability	< 60°C (pH8.3, 10min)
Optimum temperature	45°C
Michaelis Constant	9.5×10-3M (NH3); 5.0×10-3M (α-Ketoglutarate); 8.4×10-5M (NADH)
Inhibitors	Ag+, Hg2+, Cu2+, Zn2+ .
Pathway	Arginine and proline metabolism; D-Glutamine and D-glutamate metabolism; Glutamate metabolism; Nitrogen metabolism; Metabolism of amino acids.
Function	ATP binding; GTP binding; glutamate dehydrogenase [NAD(P)+] activity; glutamate dehydrogenase activity; nucleotide binding; oxidoreductase activity.
Unit Definition	One unit will convert one micromole of α-ketoglutarate to L-glutamate per min at pH 8.3 at 30°C.

Usage and Packaging

Preparation Instructions	The enzyme is reconstituted in 100mM Tris-HCl buffer, pH 8.3 for activity assay.

Storage and Shipping Information

Storage	-20°C