Tribioscience

Glutamate dehydrogenase(NADP dependent), Enzyme Activity

Catalog	Unit
TBP0023-1KU	1000 U
TBP0023-5KU	5000 U

Preparation and Specification

Appearance: Solution with 50mM Tris-HCl buffer containing 0.05% NaN_3 and 5.0mM EDTA, pH 7.8

Activity: GradeII·III 300U/mg-protein or more (9,000U/ml or more)

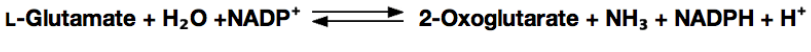
Contaminants: NADPH oxidase $\leq 1.0\times10^{-2}$%

Glutathione reductase $\leq 1.0\times10^{-2}$% (GradeII-209) $\leq 1.0\times10^{-1}$% (GradeIII-309)

Stabilizer: Ethylenediaminetetraacetic acid (EDTA)

Properties

L-Glutamate : $NADP^+$ oxidoreductase (deaminating) (EC 1.4.1.4)



Stability: Stable at -20°C for at least One year

Molecular weight: approx. 300,000

Isoelectric point: 4.6

Michaelis constants: 1.1×10^{-3}M (NH_3), 3.4×10^{-4}M (α-Ketoglutarate)

1.2×10^{-3}M (L-Glutamate), 1.4×10^{-5}M (NADPH), 1.5×10^{-5}M ($NADP^+$)

Structure: 6 subunits (M.W.50,000) per enzyme molecule

Inhibitors: Hg^{++}, Cd^{++}, p-chloromercuribenzoate, pyridine, 4-4'-dithiopyridine, 2,2'-dithiopyridine

Optimum pH: 8.5 (α-KG→L-Glu) 9.8 (L-Glu→α-KG)

Optimum temperature: 45°C (α-KG→L-Glu) 45-55°C (L-Glu→α-KG)

pH Stability: pH 6.0-8.5 (25°C, 20hr)

Thermal stability: below 50°C (pH 7.4, 10min)

Applications

This enzyme is useful for enzymatic determination of NH_3, α-ketoglutaric acid and L-glutamic acid, and for assay of leucine aminopeptidase and urease. This enzyme is also used for enzymatic determination of urea when coupled with urease (URH-201) in clinical analysis.

For research use only

Tribioscience, Inc.; 365 San Aleso Ave, Sunnyvale, CA 94085 Phone: 408-498-0197
info@tribioscience.com; www.tribiosciences.com