

Glutamate dehydrogenase(NAD dependent), Enzyme Activity

Catalog	Unit
TBP0024-1KU	1000 U
TBP0024-5KU	5000 U

Preparation and Specification

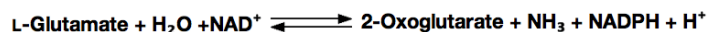
Appearance: White amorphous powder, lyophilized

Activity: GradeII 100 U/mg-solid or more

Contaminants: NAD oxidase $\leq 1.0 \times 10^{-2}\%$

L-Glutamate : NAD⁺ oxidoreductase (deaminating) (EC 1.4.1.2)

Properties



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

Molecular weight: approx. 260,000

Isoelectric point: 5.6

Michaelis constants: $9.21 \times 10^{-3}\text{M}$ (NH₃), $4.80 \times 10^{-3}\text{M}$ (α -Ketoglutarate)

$7.8 \times 10^{-5}\text{M}$ (L-Glutamate), $1.29 \times 10^{-4}\text{M}$ (NADH), $5.89 \times 10^{-4}\text{M}$ (NAD⁺)

Structure: 6 subunits per enzyme molecule

Inhibitors: Heavy metals, PCMB, IAA

Optimum pH: 7.5-8.0 (α -KG→L-Glu) 9.0 (L-Glu→ α -KG)

Optimum temperature: 55°C (α -KG→L-Glu) 50°C (L-Glu→ α -KG)

pH Stability: pH 5.0-10.0 (25°C, 20hr)

Thermal stability: below 50°C (pH 8.3, 10min)

Applications

This enzyme is useful for enzymatic determination of NH₃, 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 in clinical analysis.

For research use only