

Leucine Dehydrogenase from Bacillus sp.

Product Code: 182650

EC no: 1.4.1.9

SKU: 182650

Category: [Enzymes](#)

PRODUCT DESCRIPTION

SPECIFICATIONS:

EC 1.4.1.9

Product name: L-Leucine: NAD⁺ oxidoreductase (deaminating)

Appearance: White amorphous powder, lyophilized

Activity: Grade II, 20 U/mg-solid or more (contains approx. 70% of stabilizers)

Contaminants: Leucylpeptide decomposing enzymes:

(Leu-Val): $\leq 1.0 \times 10^{-2}\%$, (Leu-Gly-Gly): $\leq 1.0 \times 10^{-2}\%$

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

Stabilizers: 2-Mercaptoethanol, L-cysteine, dithiothreitol, ethylenediaminetetraacetate

Stability: Stable at -20 °C for at least 12 months

Molecular weight: 245,000

Michaelis constants: $1.0 \times 10^{-3} \text{M}$ (L-Leucine), $3.9 \times 10^{-4} \text{M}$ (NAD^+), $3.5 \times 10^{-5} \text{M}$ (NADH), $3.1 \times 10^{-4} \text{M}$ α -Ketoisocaproate (α -KIC), $2.0 \times 10^{-1} \text{M}$ (NH_3)

Structure: 6 subunits per mol of enzyme

Inhibitors: Na_2S , Hg^{2+} , Cu^{2+} , Co^{2+} , Mg^{2+} , p-chloromercuribenzoate

Optimum pH: 10.5 - 10.8 (L-Leu $\rightarrow$ α -KIC), 9.4 (α -KIC $\rightarrow$ L-Leu)

Optimum temperature: above 70°C

pH Stability: pH 5.5–10.5 (25°C , 20hr)

Thermal stability: Below 60°C (pH 6.9, 10min)