



3-HYDROXYBUTYRATE DEHYDROGENASE from a prokaryote (Lot 120701a)

Recombinant

E-HBDH

05/13

(EC 1.1.1.30) (R)-3-hydroxybutanoate:NAD⁺ oxidoreductase

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 29,177)
- Single major band on isoelectric focusing (pI ~ 6.9)

2. SPECIFIC ACTIVITY:

140 U/mg protein at pH 8.0 and 25°C.

One Unit of 3-hydroxybutyrate dehydrogenase (3-HBDH) is defined as the amount of enzyme required to produce one μ mole of NADH from NAD⁺ under the following assay conditions:

Tris.HCl buffer, pH 8.0	143 mM
D-/L- β -Hydroxybutyric acid	28.3 mM
NAD ⁺	2.1 mM

3. OTHER ACTIVITIES (as a percentage of 3-HBDH activity):

Enzyme Measured	Substrate	Activity, %
3-HBDH	D- β -hydroxybutyric acid	100
NADH oxidase	NADH	< 0.0001

4. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 8.0 and up to 25°C.

5. STORAGE AND USE CONDITIONS/RECOMMENDATIONS:

The enzyme is supplied as an ammonium sulphate suspension and should be stored at 4°C. For assay, this enzyme should be diluted in 200 mM Tris/HCl buffer, pH 8.0. **Swirl to mix the enzyme suspension immediately prior to use.**