



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

Recombinant

E-HBDH

03/18

(EC 1.1.1.30) 3-hydroxybutyrate dehydrogenase; (R)-3-hydroxybutanoate:NAD⁺ oxidoreductase
CAS: 9028-38-0

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 29,000)
- One major band on isoelectric focusing (pI ~ 6.9)

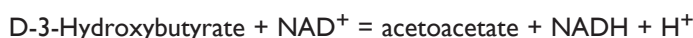
2. SPECIFIC ACTIVITY:

140 U/mg protein (on D-β-hydroxybutyric acid) at pH 8.0 and 25°C

One Unit of 3-hydroxybutyrate dehydrogenase is defined as the amount of enzyme required to oxidise one μmole of D-β-hydroxybutyric acid (28.3 mM) per minute in the presence of NAD⁺ in Tris-HCl buffer (143 mM), pH 8.0 at 25°C.

3. SPECIFICITY:

Catalyses the following reaction:



4. RELATIVE RATES OF HYDROLYSIS OF SUBSTRATES:

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

Action on substrates was determined in Tris-HCl buffer, pH 8.0 at 25°C.

5. PHYSICOCHEMICAL PROPERTIES:

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

6. STORAGE CONDITIONS:

The enzyme is supplied as an ammonium sulphate suspension containing 0.02% (w/v) sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in Tris-HCl buffer (200 mM), pH 8.0. **Swirl to mix the enzyme immediately prior to use.**