



ISOCITRATE DEHYDROGENASE from *B. subtilis* (Lot 101101a)

Recombinant

E-ICDHBS

09/15

(EC 1.1.1.42) isocitrate:NADP⁺ oxidoreductase (decarboxylating)

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 48,581)
- Single major band on isoelectric focusing (pI ~ 5.4)

2. SPECIFIC ACTIVITY:

12.9 U/mg protein at pH 7.6 and 25°C.

One Unit of isocitrate dehydrogenase is defined as the amount of enzyme required to produce one μ mole of NADPH from NADP⁺ under the following assay conditions:

Tris.HCl buffer, pH 7.6	143 mM
MgCl ₂	7.1 mM
NADP ⁺	0.70 mM
D-/L-Isocitric acid	0.28 mM

3. OTHER ACTIVITIES (as a percentage of isocitrate dehydrogenase activity):

Enzyme Measured	Substrate	Activity, %
Isocitrate dehydrogenase	D-isocitric acid	100
NADH oxidase	NADH	<0.001
NADPH oxidase	NADPH	<0.01

4. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 7.6 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 7.6 containing 10 mM MgCl₂ and 1 mg/ml BSA. **Swirl to mix the enzyme suspension immediately prior to use.**