

## IDH1 Human

**Description:** IDH1 Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 434 amino acids (1-414) and having a molecular mass of 48.8 kDa. IDH1 is fused to a 20 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

Catalog #: ENPS-200

For research use only.

**Synonyms:** Isocitrate dehydrogenase [NADP] cytoplasmic, EC 1.1.1.42, Cytosolic NADP-isocitrate dehydrogenase, Oxalosuccinate decarboxylase, IDH, NADP(+)-specific ICDH, IDP, PICD.

**Source:** E.coli.

**Physical Appearance:** Sterile Filtered colorless solution.

**Amino Acid Sequence:** MGSSHHHHHH SSGLVPRGSH MSKKISGGSV VEMQGDEMTR  
IIWELIKEKL IFPYVELDLH SYDLGIENRD ATNDQVTKDA AEAIKKHNVG VKCATITPDE  
KRVEEFKLLQ MWKSPNGTIR NILGGTVFRE AIICKNIPRL VSGWVKPIII GRHAYGDQYR  
ATDFVVPGP KVEITYTPSD GTQKVTVLVH NFEEGGGVAM GMYNQDKSIE DFAHSSFQMA  
LSKGWPLYLS TK

**Purity:** Greater than 95% as determined by SDS-PAGE.

### Formulation:

The IDH1 solution (1mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.1M NaCl, 1mM DTT, 0.1mM PMSF and 20% glycerol.

### Stability:

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### Introduction:

Isocitrate Dehydrogenase is an enzyme of the oxidoreductase class that catalyzes the conversion of isocitrate and NAD<sup>+</sup> to yield 2-ketoglutarate, carbon dioxide, and NADH. It occurs in cell mitochondria. The enzyme requires Mg<sup>2+</sup>, Mn<sup>2+</sup>; it is activated by ADP, citrate, and Ca<sup>2+</sup>, and inhibited by NADH, NADPH, and ATP. The reaction is the key rate-limiting step of the citric acid (tricarboxylic) cycle.

### Biological Activity:

The Specific activity is > 0.7 units/ml. One unit will convert 1.0 umole of isocitrate to alpha-ketoglutarate per minute at pH7.5 at 25C.

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