

Isocitrate dehydrogenase/IDH1 Protein, Human, Recombinant (His)

General Information

Synonyms:	HEL-S-26;HEL-216;IDP;IDCD;PICD;IDH;isocitrate dehydrogenase 1 (NADP+), soluble;IDPC
Protein Construction:	A DNA sequence encoding the human IDH1 (O75874) (Met 1-Leu 414) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Met 1
Species:	Human
Expression Host:	E. coli
Accession:	O75874
Molecular Weight:	48 kDa (predicted); 43 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 50 mM Tris, 200 mM NaCl, 1 mM DTT, 10% Glycerol, pH 7.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:	A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Reference

- Takano S, et al.(2011) Detection of IDH1 mutation in human gliomas: comparison of immunohistochemistry and sequencing. *Brain Tumor Pathol.* 28(2): 115-23.
- Geisbrecht BV, et al.(1999) The human PICD gene encodes a cytoplasmic and peroxisomal NADP(+)-dependent isocitrate dehydrogenase. *J Biol Chem.* 274(43): 30527-30533.
- Nekrutenko A, et al.(1998) Cytosolic isocitrate dehydrogenase in humans, mice, and voles and phylogenetic analysis of the enzyme family. *Mol Biol Evol.* 15(12): 1674-1684.
- Henke B, et al.(1998) IDP3 encodes a peroxisomal NADP-dependent isocitrate dehydrogenase required for the beta-oxidation of unsaturated fatty acids. *J Biol Chem.* 273(6): 3702-3711.
- Gabriel JL, et al.(1986) Activity of purified NAD-specific isocitrate dehydrogenase at modulator and substrate concentrations approximating conditions in mitochondria. *Metabolism.* 35(7): 661-667.

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