Recombinant Human Isocitrate dehydrogenase /IDH1 Protein

Catalog No.: RP03295LQ

Sequence Information

Species
Human

Gene ID
3417

Swiss Prot
O75874

Tags
C-His

Synonyms
Isocitrate dehydrogenase; IDH1; IDH; IDPc; PICD; IDP; DCD; IDCD; ICDH

Product Information

Source
E.coli

Purification
≥ 95 % as determined by Bis-Tris PAGE;≥ 90 % as determined by HPLC.

Calculated MW
47.35 kDa

Observed MW
45-50 kDa

Endotoxin
< 1 EU/μg of the protein by LAL method.

Formulation
Supplied as a 0.22 μm filtered solution of 50 mM Tris, 200 mM NaCl, 1 mM DTT, 10% Glycerol, pH 7.5. Contact us for customized product form or formulation.

Reconstitution

Background

IDH1 is one of three isocitrate dehydrogenase isozymes, the other two being IDH2 and IDH3, and encoded by one of five isocitrate dehydrogenase genes. IDH1 forms an asymmetric homodimer in the cytoplasm and carries out its function through two hydrophilic active sites formed by both protein subunits. As an isocitrate dehydrogenase, IDH1 catalyzes the reversible oxidative decarboxylation of isocitrate to yield α-ketoglutarate (α-KG) as part of the TCA cycle in glucose metabolism. This step also allows for the concomitant reduction of nicotinamide adenine dinucleotide phosphate (NADP+) to reduced nicotinamide adenine dinucleotide phosphate (NADPH). In addition, IDH1 is key to β-oxidation of unsaturated fatty acids in the peroxisomes of liver cells. IDH1 also participates in the regulation of glucose-induced insulin secretion. Under hypoxic conditions, IDH1 catalyzes the reverse reaction of α-KG to isocitrate, which contributes to citrate production via glutaminolysis.

Basic Information

Description
Recombinant Human Isocitrate dehydrogenase/IDH1 Protein is produced by E.coli expression system. The target protein is expressed with sequence (Ser2-Leu414) of human IDH1 (Accession #O75874) fused with His tag at the C-terminus.

Activity

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -70℃

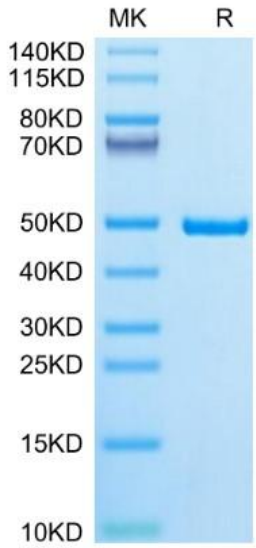
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

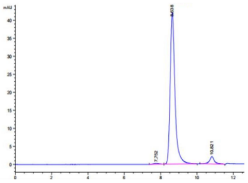
400-999-6126
cn.market@abclonal.com.cn
www.abclonal.com.cn

For research use only. Not for therapeutic or diagnostic purposes.
Please visit http://abclonal.com for a complete listing of recommended products.

Validation Data



Recombinant Human Isocitrate dehydrogenase/IDH1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



The purity of Human IDH1 is greater than 95% as determined by SEC-HPLC.