Datasheet for ABIN2723845

Isocitrate Dehydrogenase Protein (IDH) (His tag)

2 Images

Go to Product page

Overview

Quantity:	20 µg
Target:	Isocitrate Dehydrogenase (IDH)
Origin:	Human
Source:	Insect cells (Sf9)
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This Isocitrate Dehydrogenase protein is labelled with His tag.
Application:	Antibody Production (AbP), Standard (STD), Functional Studies (Func), Protein Interaction (PI)

Product Details

Specificity:	Optimal preservation of protein structure, post-translational modifications and functions.
Characteristics:	• Recombinant human Isocitrate dehydrogenase / IDH (C-term polyhistidine tag) protein expressed in Sf9 cells. • Produced with end-sequenced ORF clone • Tested for bioactivity.
Purity:	> 80 % as determined by SDS-PAGE and Coomassie blue staining
Biological Activity Comment:	Enzymatic activities were determined by monitoring NADPH formation based on the absorbance at 345nm. The reaction was carried out at 37? for 10 minutes in the presence of isocitrate as a substrate and NADP as a cofactor. The data which presented a good linear relation on the curve was used to calculate the specific activity, and one unit is defined as converting 1.0 umole of NADP to NADPH per min at 37?. In summary, the wildtype IDH1 produced from HEK293 cells and insect cells are active while the R132H mutant or the

Product Details

WT/R132H heterodimers are inactive.

Target Details

Target:	Isocitrate Dehydrogenase (IDH)
Alternative Name:	Isocitrate Dehydrogenase,idh (IDH Products)
Background:	Isocitrate dehydrogenases catalyze the oxidative decarboxylation of isocitrate to 2-oxoglutarate. These enzymes belong to two distinct subclasses, one of which utilizes NAD(+) as the electron acceptor and the other NADP(+). Five isocitrate dehydrogenases have been reported: three NAD(+)-dependent isocitrate dehydrogenases, which localize to the mitochondrial matrix, and two NADP(+)-dependent isocitrate dehydrogenases, one of which is mitochondrial and the other predominantly cytosolic. Each NADP(+)-dependent isozyme is a homodimer. The protein encoded by this gene is the NADP(+)-dependent isocitrate dehydrogenase found in the cytoplasm and peroxisomes. It contains the PTS-1 peroxisomal targeting signal sequence. The presence of this enzyme in peroxisomes suggests roles in the regeneration of NADPH for intraperoxisomal reductions, such as the conversion of 2, 4-dienoyl-CoAs to 3-enoyl-CoAs, as well as in peroxisomal reactions that consume 2-oxoglutarate, namely the alpha-hydroxylation of phytanic acid. The cytoplasmic enzyme serves a significant role in cytoplasmic NADPH production. Alternatively spliced transcript variants encoding the same protein have been found for this gene.
Molecular Weight:	47 kDa
NCBI Accession:	NP_005887

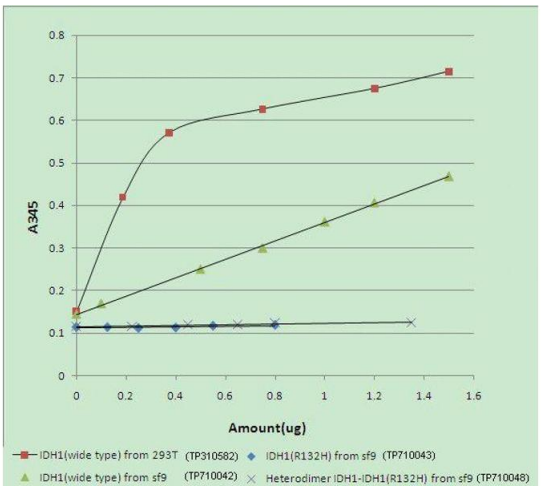
Application Details

Application Notes:	Recombinant human proteins can be used for: Native antigens for optimized antibody production Positive controls in ELISA and other antibody assays Protein-protein interaction In vitro biochemical assays and cell-based functional assays
Comment:	The tag is located at the C-terminal.
Restrictions:	For Research Use only

Handling

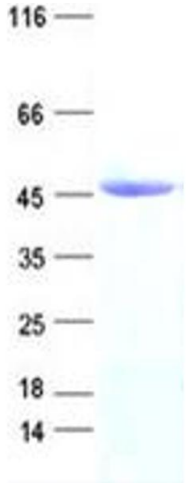
Concentration:	> 50 µg/mL
Buffer:	50 mM Tris-HCl pH 8.0, 150 mM NaCl, 10 % glycerol. Store at -80C. Avoid repeated freeze-thaw cycles. Stable for at least 3 months from receipt of products under proper storage and handling conditions. < td valign=top>
Storage:	-80 °C
Storage Comment:	Store at -80°C. Thaw on ice, aliquot to individual single-use tubes, and then re-freeze immediately. Only 2-3 freeze thaw cycles are recommended.

Images



Activity Assay

Image 1. Bioactivity measured with Activity Assay



Western Blotting

Image 2. Validation with Western Blot