

Recombinant Human ACO1, His-tagged

Cat. No. ACO1-26476TH Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant full length Human Aconitase 1 with N terminal His tag; 912 amino acids with tag, MWt 100.8 kDa.
Species	Human
Source	E.coli
ProteinLength	889 amino acids
Description	<p>Aconitase 1, also known as iron regulatory element binding protein 1 (IREB1), is a cytosolic protein which binds to iron-responsive elements (IREs). IREs are stem-loop structures found in the 5' UTR of ferritin mRNA, and in the 3' UTR of transferrin receptor mRNA. The iron-induced binding to the IRE results in repression of translation of ferritin mRNA, and inhibition of degradation of the otherwise rapidly degrading transferrin receptor mRNA. Thus, IREB1 plays a central role in cellular iron homeostasis. It was also shown to have aconitase activity, and hence grouped with the aconitase family of enzymes.</p>
Conjugation	HIS
Molecular Weight	100.800kDa inclusive of tags
Form	Liquid
Purity	>90% by SDS-PAGE

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Storage buffer	Preservative: None Constituents: 10% Glycerol, 20mM Tris HCl, 2mM DTT, 100mM Sodium chloride, pH 8.0
Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Sequences of amino acids	<p>MGSSHHHHHSSGLVPRGSHMGSMSPFAHLAEPLDPVQPGKKFFNLNKLEDSRY GRLPFSIRVLEAAIRNCDEFLVKKQDIENILHWNVTQHKNIEVPFKPARVILQDFTGV PAVVDFAAMRDAVKKLGGDPEKINPVCADLVIDHSIQVDFNRRADSLQKNQDLEFE RNRERFEFLKWGSQAFHNMRIIPPGSGIIHQVNLEYLARVVFDDQGGYYYPDSLVTGTD SHTTMIDGLGILGWGVGGIEAEAVMLGQPISMVLPQVIGYRLMGKPHPLVTSTDIVLTI TKHLRQVGVVGKFEFFGPGVAQLSIADRATIANMCPEYGATAAFFPVDEVSITYLV QTGRDEEKLYIKKYLQAVGMFRDFNDPSQDPDFTQVVELDLKTVVPCCSGPKRPQ DKVAVSDMKKDFESCLGAKQGFQVAPPEHHNDHKTFIYDNTEFTLAHGSVIAAI TSCTNTSNPSVMLGAGLLAKKAVDAGLNVMPYIKTSLSPGSGVVTTYLQESGVMPY LSQLGFDVVGYGCMTCIGNSGPLPEPVVEAITQGDLVAVGVLSGNRNFEGRVHPNT RANYLASPPLVIAYAIAGTIRIDFEKEPLGVNAKGQQVFLKDIWPTRDEIQAVERQYVI PGMFKEVYQKIETVNESWNALATPSDKLFFWNSKSTYIKSPFFENLTLDLQPPKSIV DAYVLLNLGDSVTTDHISPAGNIARNSPAARYLTNRGLTPREFNSYGSRRGNDAVM ARGTFANIRLLNRFLNKQAPQTIHLPSGEILDVFDAAEYQQAGLPLIVLAGKEYGAG SSRDWAAKGPFLGKAVLAESYERIHRSNLVGMGVIPLEYLPGENADALGLTGQER YTIIPENLKPQMKVQVKLDTGKTFQAVMRFDTDVELTYFLNGGILNYMIRKMAK</p>
Sequence Similarities	Belongs to the aconitase/IPM isomerase family.
GENE INFORMATION	
Gene Name	ACO1 aconitase 1, soluble [Homo sapiens]
Official Symbol	ACO1

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Synonyms	ACO1; aconitase 1, soluble; IREB1; cytoplasmic aconitate hydratase; IREBP; IRP1;
Gene ID	48
mRNA Refseq	NM_002197
Protein Refseq	NP_002188
MIM	100880
Uniprot ID	P21399
Chromosome Location	9p21.1
Pathway	Citrate cycle (TCA cycle), organism-specific biosystem; Citrate cycle (TCA cycle), conserved biosystem; Citrate cycle, first carbon oxidation, oxaloacetate => 2-oxoglutarate, organism-specific biosystem; Citrate cycle, first carbon oxidation, oxaloacetate =>
Function	4 iron, 4 sulfur cluster binding; 4 iron, 4 sulfur cluster binding; RNA binding; RNA binding; aconitate hydratase activity;

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