

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	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.
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	MGSSHHHHHHSSGLVPRGSHMGSMNPFAHLAEPLDPVQPGKKFFNLNKLEDSRY GRLPFSIRVLLEAAIRNCDEFLVKKQDIENILHWNVTQHKNIEVPFKPARVILQDFTGV PAVVDFAAMRDAVKKLGGDPEKINPVCPADLVIDHSIQVDFNRRADSLQKNQDLEFE RNRERFEFLKWGSQAFHNMRIIPPGSGIIHQVNLEYLARVVFDDQDGYYPDSLVTGTD SHTTMIDGLGILGWGVGGIEAEAVMLGQPISMVLPQVIGYRLMGKPHPLVTSTDIVLTI TKHLRQVGVVGKFVEFFGPGVAQLSIADRATIANMCPEYGATAAFFPVDEVSITYLV QTGRDEEKLKYIKKYLQAVGMFRDFNDPSQDPDFTQVVELDLKTVVPCCSGPKRPQ DKVAVSDMKKDFESCLGAKQGFGKFQVAPEHHNDHKTFIYDNTEFTLAHGSVVIAAI TSCTNTSNPSVMLGAGLLAKKAVDAGLNVMPYIKTSLSPGSGVVTTYLQESGVMPY LSQLGFDVVGYGCMTCIGNSGPLPEPVVEAITQGDLVAVGVLSGNRNFEGRVHPNT RANYLASPPLVIAYAIAGTIRIDFEKEPLGVNAKGQQVFLKDIWPTRDEIQAVERQYVI PGMFKEVYQKIETVNESWNALATPSDKLFFWNSKSTYIKSPFFENLTLDLQPPKSIV DAYVLLNLGDSVTTDHISPAGNIARNSPAARYLTNRGLTPREFNSYGSRRGNDAVM ARGTFANIRLLNRFLNKQAPQTIHLPSGEILDVFDAAERYQQAGLPLIVLAGKEYGAG SSRDWAAKGPFLLGKAVLAESYERIHRSNLVGMGVIPLEYLPGENADALGLTGQER YTIIPENLKPQMKVQVKLDTGKTFQAVMRFDTDVELTYFLNGGILNYMIRKMAK
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;