

Datasheet for ABIN7551945

Aconitase 1 Protein (ACO1) (AA 1-889) (His tag)[Go to Product page](#)

Overview

Quantity:	1 mg
Target:	Aconitase 1 (ACO1)
Protein Characteristics:	AA 1-889
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Aconitase 1 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant ACO1 Protein expressed in mammalian cells.
Sequence:	MSNPF AHLAE PLDPVQPGKK FFNLNKLEDS RYGR LPFSIR VLLEAAIRNC DEFLVKKQDI ENILHWNVTQ HKNIEVPFKP ARVILQDFTG VPAVV DFAAM RDAVKKLG GD PEKINPVC PA DLVIDHSIQV DFNRRADSLQ KNQDLEFERN RERFEFLK WG SQA FHNMR II PPGSGIIHQV NLEYLARVVF DQDGYYPDS LVGTDSHTTM IDGLGILGWG VGGIEAEAVM LGQPISMVLP QVIGYRLMGK PHPLVTSTDI VLTITKHLRQ VGVVGKFEV FGP GVAQLSI ADRATIANMC PEYGATAAFF PVDEVSITYL VQTGRDEEKL KYIKKYLQAV GMFRDFNDPS QDPDFTQVVE LDLKTVPCC SGPKRPQDKV AVSDMKKDFE SCLGAKQGFK GFQVAPEHHN DHKTFIYDNT EFTLAHGSVV IAAIT SCTNT SNPSV MLGAG LLA KKA VDAG LNVMPYIKTS LSPGSGWV TY YLQESGVMPY LSQ LGF D VVG YGCMT CIGNS GPLPEPVVEA ITQGD LVA VG VLSG NRNFEG RVHPNTRANY LASPPLVIAY AIAGTIRIDF EKEPLGVNAK GQQVFLKDIW PTRDEIQAVE RQYVIPGMFK EVYQKIETVN ESWNALATPS DKLFFWNSKS TYIKSPFFFE NLTLDLQPPK SIVDAYVLLN LGDSVTTDHI SPAGNIARNS PAARYLTNRG LTPREFNSYG SRRGNDAVMA

Product Details

RGTFANIRLL NRFLNKQAPQ TIHLPSGEIL DVFDAAERYQ QAGLPLIVLA GKEYGAGSSR
DWAAKGPFLL GIKAVLAESY ERIHRSNLVG MGVIPLEYLP GENADALGLT GQUERYTIIP
ENLKPQMKVQ VKLDTGKTFQ AVMRFDTDVE LTYFLNGGIL NYMIRKMAK **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

Specificity: If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.

Characteristics: Key Benefits:

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Purity: > 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)

Grade: custom-made

Target Details

Target: Aconitase 1 (ACO1)

Alternative Name: ACO1 ([ACO1 Products](#))

Background: Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Ferritin repressor protein) (Iron regulatory protein 1) (IRP1) (Iron-responsive element-binding protein 1) (IRE-BP 1),FUNCTION: Bifunctional iron sensor that switches between 2 activities depending on iron availability (PubMed:1946430, PubMed:1281544, PubMed:8041788). Iron deprivation, promotes its mRNA binding activity through which it regulates the expression of genes involved

Target Details

in iron uptake, sequestration and utilization (PubMed:1946430, PubMed:1281544, PubMed:8041788, PubMed:23891004). Binds to iron-responsive elements (IRES) in the untranslated region of target mRNAs preventing for instance the translation of ferritin and aminolevulinic acid synthase and stabilizing the transferrin receptor mRNA (PubMed:1946430, PubMed:1281544, PubMed:8041788, PubMed:23891004). {ECO:0000269|PubMed:1281544, ECO:0000269|PubMed:1946430, ECO:0000269|PubMed:23891004, ECO:0000269|PubMed:8041788}., FUNCTION: Conversely, when cellular iron levels are high, binds a 4Fe-4S cluster which precludes RNA binding activity and promotes the aconitase activity, the isomerization of citrate to isocitrate via cis-aconitate. {ECO:0000269|PubMed:1281544, ECO:0000269|PubMed:1946430, ECO:0000269|PubMed:8041788}.

Molecular Weight: 98.4 kDa

UniProt: [P21399](#)

Pathways: [Transition Metal Ion Homeostasis](#)

Application Details

Application Notes: We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months