

Datasheet for ABIN3133562

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

Overview

Quantity:	1 mg
Target:	Aconitase 1 (ACO1)
Protein Characteristics:	AA 1-889
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Aconitase 1 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

Product Details

Sequence:	MKNPFAHLAE PLDAAQPGKR FFNLNKLEDS RYGRLPFSIR VLLEAAVRNC DEFLVKKNDI ENILNWNVMQ HKNIEVPFKP ARVILQDFTG VPAVVDFAAM RDAVKKLGGN PEKINPVCPA DLVIDHSIQV DFNRRADSLQ KNQDLEFERN KERFEFLKWG SQAFCNMRRI PPGSGIIHQV NLEYLARVVF DQDGCYYPDS LVGTDSHTTM IDGLGVLGWG VGGIEAEAVM LGQPISMVLP QVIGYKLMGK PHPLVTSTDI VLTITKHLRQ VGVVGKFVEF FGPGVAQLSI ADRATIANMC PEYGATAAFF PVDEVSIAYL LQTGREEDKV KHIQKYLQAV GMFRDFNDTS QDPDFTQVVE LDLKTVPCC SGPKRPQDKV AVSEMKKDFE SCLGAKQGFK GFQVAPDRHN DRKTFLYSNS EFTLAHGSVV IAAIT SCTNT SNPSVMLGAG LLAKKAVEAG LSVKPYIKTS LSPGSGVVTY YLRESGVMPY LSQLGFDVVG YGCMT CIGNS GPLPEPVVEA ITQGD LVAVG VLSG NRNFEG RVHPNTRANY LASPPLVIAY AIAGTVRIDF EKEPLGVNAQ GRQVFLKDIW PTRDEIQAVE RQHVIPGMFK EVYQKIETVN KSWNALAAPS EKLYAWNPKS TYIKSPPFEE SLTDLQPPK SIVDAYVLLN LGDSVTTDHI SPAGNIARNS PAARYLTNRG LTPREFNSYG SRRGNDAIMA
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RGTFANIRLL NKFLNKQAPQ TVHLPSGETL DVFDAAERYQ QAGLPLIVLA GKEYGSGSSR
DWAAGPFLG GIKAVLAESY ERIHRSNLVG MGVIPLEYLP GETADSLGLT GRERYTINIP
EDLKPRMTVQ IKLDTGKTFQ AVMRFDTDVE LTYFHNGGIL NYMIRKMAQ

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Aco1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- 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 will ensure that you receive a correctly folded protein.

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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

The concentration of our recombinant proteins is measured using the absorbance at 280nm.

The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE.
2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Sterility:

0.22 µm filtered

Product Details

Endotoxin Level: Protein is endotoxin free.

Grade: Crystallography grade

Target Details

Target: Aconitase 1 (ACO1)

Alternative Name: Aco1 ([ACO1 Products](#))

Background: Iron sensor. Binds a 4Fe-4S cluster and functions as aconitase when cellular iron levels are high. Functions as mRNA binding protein that regulates uptake, sequestration and utilization of iron when cellular iron levels are low. Binds to iron-responsive elements (IRES) in target mRNA species when iron levels are low. Binding of a 4Fe-4S cluster precludes RNA binding (By similarity). {ECO:0000250}., Catalyzes the isomerization of citrate to isocitrate via cis-aconitate. {ECO:0000250}.

Molecular Weight: 99.1 kDa Including tag.

UniProt: [P28271](#)

Pathways: [Transition Metal Ion Homeostasis](#)

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Comment: Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: 100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Handling

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)

Images



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process