

# ACO1 Antibody (N-Term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP22028a

## Product Information

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<b>Application</b>	WB, E
<b>Primary Accession</b>	<a href="#">P21399</a>
<b>Other Accession</b>	<a href="#">Q01059</a> , <a href="#">Q63270</a>
<b>Reactivity</b>	Human, Rat, Mouse
<b>Predicted</b>	Rat
<b>Host</b>	Rabbit
<b>Clonality</b>	polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB54995
<b>Calculated MW</b>	98399

## Additional Information

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<b>Gene ID</b>	48
<b>Other Names</b>	Cytoplasmic aconitate hydratase, Aconitase, 4.2.1.3, Citrate hydro-lyase, Ferritin repressor protein, Iron regulatory protein 1, IRP1, Iron-responsive element-binding protein 1, IRE-BP 1, ACO1, IREB1
<b>Target/Specificity</b>	This ACO1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 124-155 amino acids from human ACO1.
<b>Dilution</b>	WB~~1:2000 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	ACO1 Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	ACO1
<b>Synonyms</b>	IREB1

## Function

Bifunctional iron sensor that switches between 2 activities depending on iron availability (PubMed:[1281544](#), PubMed:[1946430](#), PubMed:[8041788](#)). Iron deprivation, promotes its mRNA binding activity through which it regulates the expression of genes involved in iron uptake, sequestration and utilization (PubMed:[1281544](#), PubMed:[1946430](#), PubMed:[23891004](#), PubMed:[8041788](#)). 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:[1281544](#), PubMed:[1946430](#), PubMed:[23891004](#), PubMed:[8041788](#)).

## Cellular Location

Cytoplasm, cytosol.

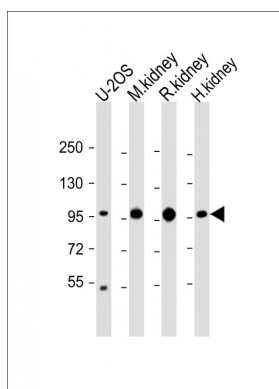
## Background

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.

## References

Hirling H.,et al.Nucleic Acids Res. 20:33-39(1992).  
Humphray S.J.,et al.Nature 429:369-374(2004).  
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DBJ databases.  
Rouault T.A.,et al.Proc. Natl. Acad. Sci. U.S.A. 87:7958-7962(1990).  
Hentze M.W.,et al.Nucleic Acids Res. 19:1739-1740(1991).

## Images



All lanes : Anti-ACO1 Antibody (N-Term) at 1:2000 dilution  
Lane 1: U-2OS whole cell lysate Lane 2: mouse kidney lysate Lane 3: rat kidney lysate Lane 4: human kidney lysate  
Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 98 kDa  
Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.