

**ACO1 Antibody (N-Term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP22028a****Specification**

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**ACO1 Antibody (N-Term) - Product Information**

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

**ACO1 Antibody (N-Term) - Additional Information****Gene ID 48****Other Names**

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

**Target/Specificity**

This ACO1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 124-155 amino acids from human ACO1.

**Dilution**

WB~~1:2000

**Format**

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.

**Storage**

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.

**Precautions**

ACO1 Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

**ACO1 Antibody (N-Term) - Protein Information****Name ACO1**

## Synonyms 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

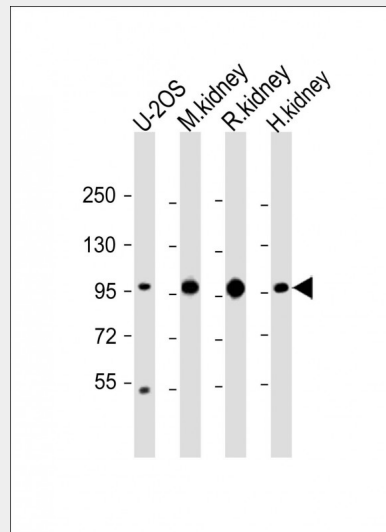
Cytoplasm, cytosol.

## ACO1 Antibody (N-Term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## ACO1 Antibody (N-Term) - 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% NFDN/TBST.

## ACO1 Antibody (N-Term) - 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.

#### **ACO1 Antibody (N-Term) - 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/DDBJ 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).