

**ACO1 Antibody (N-Term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AW5676**

**Specification**

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

Application	WB,E
Primary Accession	<a href="#">P21399</a>
Other Accession	<a href="#">Q01059</a> , <a href="#">Q63270</a>
Reactivity	Human, Mouse, Rat
Predicted	Rabbit
Host	Rabbit
Clonality	Polyclonal
Calculated MW	H=98;M=98;R=98 KDa
Isotype	Rabbit IgG
Antigen Source	HUMAN

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

**Gene ID** 48

**Antigen Region**  
124-155

**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

**Dilution**

WB~~1:1000

**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.

**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:<a href="http://www.uniprot.org/citations/1281544" target="\_blank">1281544</a>, PubMed:<a href="http://www.uniprot.org/citations/1946430" target="\_blank">1946430</a>, PubMed:<a href="http://www.uniprot.org/citations/8041788" target="\_blank">8041788</a>). Iron deprivation, promotes its mRNA binding activity through which it regulates the expression of genes involved in iron uptake, sequestration and utilization (PubMed:<a href="http://www.uniprot.org/citations/1281544" target="\_blank">1281544</a>, PubMed:<a href="http://www.uniprot.org/citations/1946430" target="\_blank">1946430</a>, PubMed:<a href="http://www.uniprot.org/citations/23891004" target="\_blank">23891004</a>, PubMed:<a href="http://www.uniprot.org/citations/8041788" target="\_blank">8041788</a>). 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:<a href="http://www.uniprot.org/citations/1281544" target="\_blank">1281544</a>, PubMed:<a href="http://www.uniprot.org/citations/1946430" target="\_blank">1946430</a>, PubMed:<a href="http://www.uniprot.org/citations/23891004" target="\_blank">23891004</a>, PubMed:<a href="http://www.uniprot.org/citations/8041788" target="\_blank">8041788</a>).

### Cellular Location

Cytoplasm, cytosol.

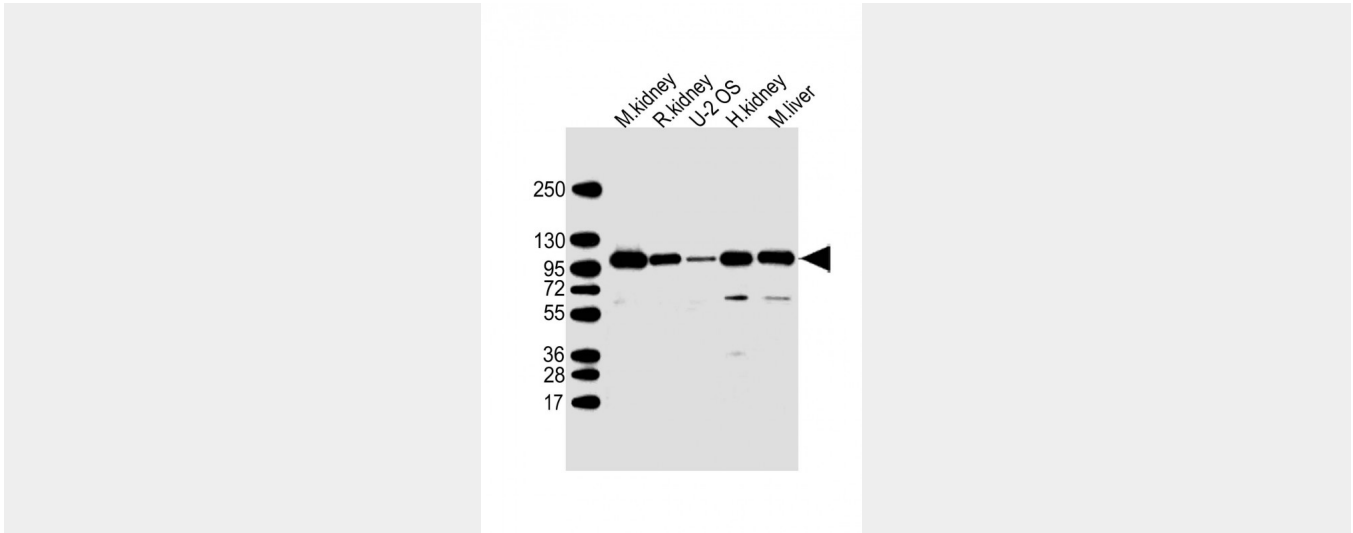
## ACO1 Antibody (N-Term) - Protocols

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 1:1000 dilution Lane 1: mouse kidney lysate Lane 2: rat kidney lysate Lane 3: U-2OS whole cell lysate Lane 4: human kidney lysate Lane 5: mouse liver 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.

#### **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).