

# Aconitase 1 (ACO1) Rabbit mAb

Catalog No.: A4821 **Recombinant**

## Basic Information

### Observed MW

98kDa

### Calculated MW

98kDa

### Category

Primary antibody

### Applications

ELISA,WB,IF/ICC

### Cross-Reactivity

Human, Mouse, Rat

### CloneNo number

ARC2731

## Background

The protein encoded by this gene is a bifunctional, cytosolic protein that functions as an essential enzyme in the TCA cycle and interacts with mRNA to control the levels of iron inside cells. When cellular iron levels are high, this protein binds to a 4Fe-4S cluster and functions as an aconitase. Aconitases are iron-sulfur proteins that function to catalyze the conversion of citrate to isocitrate. When cellular iron levels are low, the protein binds to iron-responsive elements (IREs), which are stem-loop structures found in the 5' UTR of ferritin mRNA, and in the 3' UTR of transferrin receptor mRNA. When the protein binds to IRE, it results in repression of translation of ferritin mRNA, and inhibition of degradation of the otherwise rapidly degraded transferrin receptor mRNA. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. Alternative splicing results in multiple transcript variants

## Recommended Dilutions

WB 1:500 - 1:1000

IF/ICC 1:50 - 1:200

## Immunogen Information

### Gene ID

48

### Swiss Prot

P21399

### Immunogen

A synthetic peptide corresponding to a sequence within amino acids 1-100 of human Aconitase 1 (ACO1) (P21399).

### Synonyms

IRP1; ACONS; HEL60; IREB1; IREBP; IREBP1; Aconitase 1 (ACO1)

## Contact

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## Product Information

### Source

Rabbit

### Isotype

IgG

### Purification

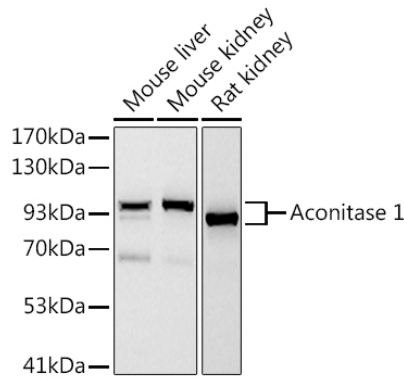
Affinity purification

### Storage

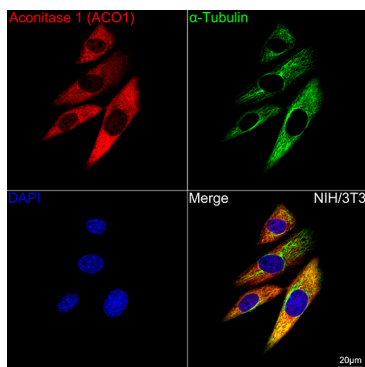
Store at -20°C. Avoid freeze / thaw cycles.

Buffer: PBS with 0.02% sodium azide,0.05% BSA,50% glycerol,pH7.3.

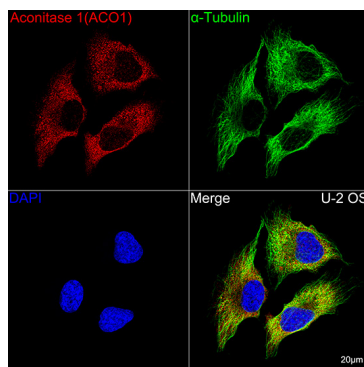
## Validation Data



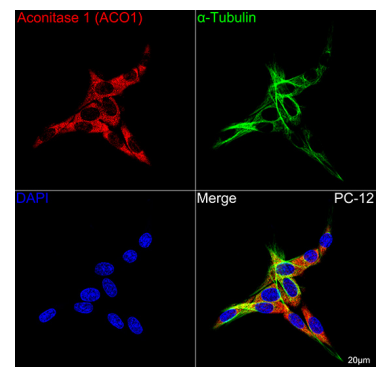
Western blot analysis of various lysates using Aconitase 1 (ACO1) Rabbit mAb (A4821) at 1:1000 dilution. Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution. Lysates/proteins: 25µg per lane. Blocking buffer: 3% nonfat dry milk in TBST. Detection: ECL Basic Kit (RM00020). Exposure time: 30s.



Confocal imaging of NIH/3T3 cells using Aconitase 1 (ACO1) Rabbit mAb (A4821, dilution 1:200) followed by a further incubation with Cy3 Goat Anti-Rabbit IgG (H+L) (AS007, dilution 1:500) (Red). The cells were counterstained with  $\alpha$ -Tubulin Mouse mAb (AC012, dilution 1:400) followed by incubation with ABflo® 488-conjugated Goat Anti-Mouse IgG (H+L) Ab (AS076, dilution 1:500) (Green). DAPI was used for nuclear staining (Blue). Objective: 100x.



Confocal imaging of U-2 OS cells using Aconitase 1 (ACO1) Rabbit mAb (A4821, dilution 1:200) followed by a further incubation with Cy3 Goat Anti-Rabbit IgG (H+L) (AS007, dilution 1:500) (Red). The cells were counterstained with  $\alpha$ -Tubulin Mouse mAb (AC012, dilution 1:400) followed by incubation with ABflo® 488-conjugated Goat Anti-Mouse IgG (H+L) Ab (AS076, dilution 1:500) (Green). DAPI was used for nuclear staining (Blue). Objective: 100x.



Confocal imaging of PC-12 cells using Aconitase 1 (ACO1) Rabbit mAb (A4821, dilution 1:200) followed by a further incubation with Cy3 Goat Anti-Rabbit IgG (H+L) (AS007, dilution 1:500) (Red). The cells were counterstained with  $\alpha$ -Tubulin Mouse mAb (AC012, dilution 1:400) followed by incubation with ABflo® 488-conjugated Goat Anti-Mouse IgG (H+L) Ab (AS076, dilution 1:500) (Green). DAPI was used for nuclear staining (Blue). Objective: 100x.