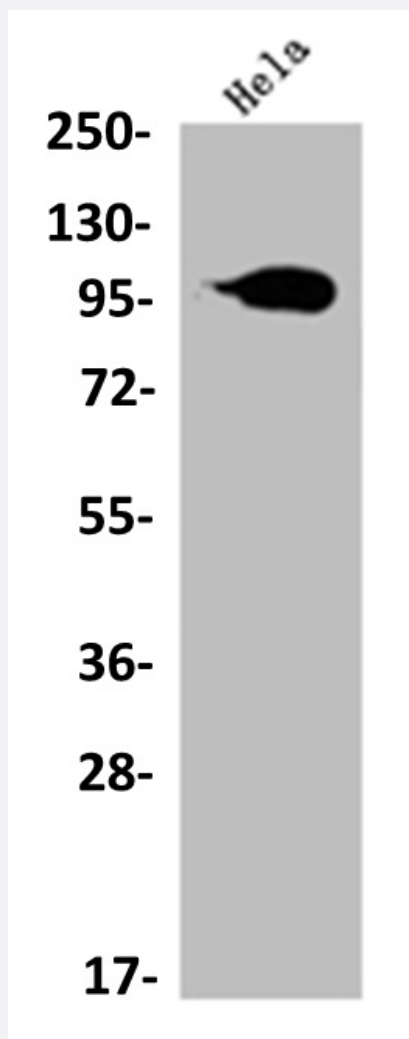


RecomAb™

# ACO1 recombinant monoclonal antibody, clone 22C10

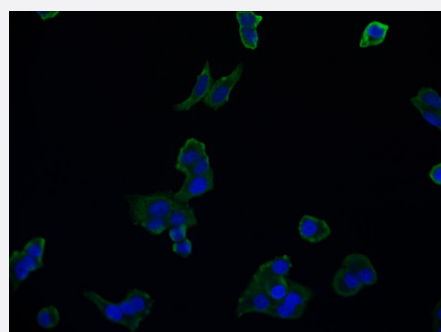
Catalog # RAB07573      Size 100 uL

## Applications



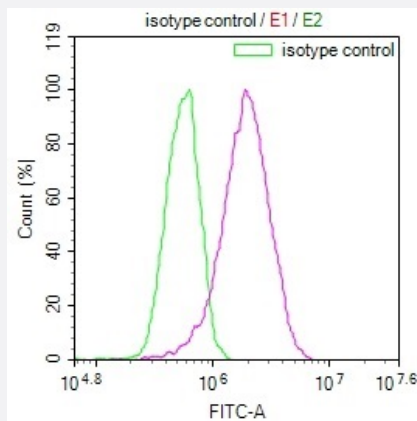
### Western Blot (Cell lysate)

Western blot analysis of HeLa whole cell lysate with ACO1 recombinant monoclonal antibody, clone 22C10 (Cat # RAB07573).



### Immunofluorescence

Immunofluorescent staining of HepG2 Cells with ACO1 recombinant monoclonal antibody, clone 22C10 (Cat # RAB07573), counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 511-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



## Flow Cytometry

Flow cytometry shows HepG2 cells stained with ACO1 recombinant monoclonal antibody, clone 22C10 (Cat # RAB07573)(red line). The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1ug/1\*10<sup>6</sup>cells) for 45min at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG(H+L) at 1:200 dilution for 35min at 4°C. Control antibody (green line) was rabbit IgG (1ug/1\*10<sup>6</sup>cells) used under the same conditions. Acquisition of >10,000 events was performed.

## Specification

|                             |   |
|-----------------------------|---|
| <b>Product Description</b>  | Rabbit recombinant monoclonal antibody raised against human ACO1.   |
| <b>Antibody Species</b>     | Rabbit  |
| <b>Immunogen</b>            | Original antibody is raised against a synthetic peptide corresponding to human ACO1.  |
| <b>Theoretical MW (kDa)</b> | Calculated MW: 100  |
| <b>Reactivity</b>           | Human   |
| <b>Form</b>                 | Liquid  |
| <b>Purification</b>         | Affinity chromatography purification  |
| <b>Isotype</b>              | IgG   |
| <b>Recommend Usage</b>      | ELISA<br>Flow Cytometry(1:50-1:200)<br>Immunofluorescence (1:50-1:200)<br>Western Blot (1:500-1:2000)<br>The optimal working dilution should be determined by the end user. |
| <b>Storage Buffer</b>       | In PBS, pH7.4 (150 mM NaCl, 0.02% sodium azide and 50% glycerol)  |
| <b>Storage Instruction</b>  | Store at -20°C or -80°C.<br>Aliquot to avoid repeated freezing and thawing.   |
| <b>Note</b>                 | This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.  |

## Applications

- Western Blot (Cell lysate)

Western blot analysis of Hela whole cell lysate with ACO1 recombinant monoclonal antibody, clone 22C10 (Cat # RAB07573).

- Immunofluorescence

Immunofluorescent staining of HepG2 Cells with ACO1 recombinant monoclonal antibody, clone 22C10 (Cat # RAB07573), counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 511-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).

- Enzyme-linked Immunoabsorbent Assay

- Flow Cytometry

Flow cytometry shows HepG2 cells stained with ACO1 recombinant monoclonal antibody, clone 22C10 (Cat # RAB07573)(red line). The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1ug/1\*10<sup>6</sup>cells) for 45min at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG(H+L) at 1:200 dilution for 35min at 4°C. Control antibody (green line) was rabbit IgG (1ug/1\*10<sup>6</sup>cells) used under the same conditions. Acquisition of >10,000 events was performed.

## Gene Info — ACO1

Entrez GeneID [48](#)

Protein Accession# [P21399](#)

Gene Name ACO1

Gene Alias ACONS, IREB1, IREBP, IREBP1, IRP1

Gene Description aconitase 1, soluble

Omim ID [100880](#)

Gene Ontology [Hyperlink](#)

### Gene Summary

Aconitase 1, also known as iron regulatory element binding protein 1 (IREB1), is a cytosolic protein which binds to iron-responsive elements (IREs). IREs are stem-loop structures found in the 5' UTR of ferritin mRNA, and in the 3' UTR of transferrin receptor mRNA. The iron-induced binding to the IRE results in repression of translation of ferritin mRNA, and inhibition of degradation of the otherwise rapidly degrading transferrin receptor mRNA. Thus, IREB1 plays a central role in cellular iron homeostasis. It was also shown to have aconitase activity, and hence grouped with the aconitase family of enzymes. [provided by RefSeq]

**Other Designations**

OTTHUMP00000021176|OTTHUMP00000021177|OTTHUMP00000045233|aconitase 1|aconitate hydratase|citrate hydro-lyase|ferritin repressor protein|iron regulatory protein 1|iron-responsive element binding protein 1

## Pathway

- [Biosynthesis of alkaloids derived from histidine and purine](#)
- [Biosynthesis of alkaloids derived from ornithine](#)
- [Biosynthesis of alkaloids derived from shikimate pathway](#)
- [Biosynthesis of alkaloids derived from terpenoid and polyketide](#)
- [Biosynthesis of phenylpropanoids](#)
- [Biosynthesis of plant hormones](#)
- [Biosynthesis of terpenoids and steroids](#)
- [Citrate cycle \(TCA cycle\)](#)
- [Glyoxylate and dicarboxylate metabolism](#)
- [Metabolic pathways](#)
- [Reductive carboxylate cycle \(CO2 fixation\)](#)