

ACO1 recombinant antibody

ACO1 Recombinant Monoclonal Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA278964	HEK293F Cell	Human, Mouse	Flow Cytometry, Functional Assay, Immunofluorescence, Western Blot, ELISA

PRODUCT SYNONYMS

ACO1; Monoclonal Recombinant Antibody; ACO1 Recombinant Monoclonal Antibody; Cytoplasmic aconitate hydratase (Aconitase)(EC 4.2.1.3)(Citrate hydro-lyase)(Ferritin repressor protein)(Iron regulatory protein 1)(IRP1)(Iron-responsive element-binding protein 1)(IRE-BP 1); IREB1; ACO1 recombinant antibody

PRODUCT SPECIFICATIONS

Host	HEK293F Cell
Reactivity	Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Number	22C10
Purity/Purification	Affinity purified
Form/Format	Liquid; PBS, 150mM NaCl, 0.02% sodium azide, 50% glycerol, pH 7.4.
Applicable Applications for ACO1 recombinant antibody	FCM/FACS (Flow Cytometry), IF (Immunofluorescence), WB (Western Blot), ELISA
Immunogen Species	Human
Immunogen	A synthesized peptide derived from Human ACO1
Conjugation	Non-conjugated
Research Area	Epigenetics and Nuclear Signaling; Cancer; Cardiovascular; Metabolism; Signal transduction
Preparation and Storage	Upon receipt, store at -20 degree C or -80 degree C. Avoid repeated freeze.

IMAGES



FCM/FACS (Flow Cytometry)

Overlay Peak curve showing HepG2 cells stained with AAA278964 (red line) at 1:100. 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*106cells) for 45min at 4?. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG(H+L) at 1:200 dilution for 35min at 4?.Control antibody (green line) was rabbit IgG (1ug/1*106cells) used under the same conditions. Acquisition of >10,000 events was performed.



IF (Immunofluorescence)

Immunofluorescence staining of HepG2 cell with AAA278964 at 1:50, 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).



WB (Western Blot)

Western BlotPositive WB detected in: Hela whole cell lysateAll lanes: ACO1 antibody at 1:2000SecondaryGoat polyclonal to rabbit IgG at 1/50000 dilutionPredicted band size: 100 kDaObserved band size: 95-130 kDa

ADDITIONAL INFORMATION

Related Product Information for ACO1 recombinant antibody	Bifunctional iron sensor that switches between 2 activities depending on iron availability (PubMed:1946430, PubMed:1281544, 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:1946430, PubMed:1281544, PubMed:8041788, PubMed:23891004). 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:1946430, PubMed:1281544, PubMed:8041788, PubMed:23891004). {ECO:0000269 PubMed:1281544, ECO:0000269 PubMed:1946430, ECO:0000269 PubMed:23891004, ECO:0000269 PubMed:8041788}.; Conversely, when cellular iron levels are high, binds a 4Fe-4S cluster which precludes RNA binding activity and promotes the aconitase activity, the isomerization of citrate to isocitrate via cis-aconitate. {ECO:0000269 PubMed:1281544, ECO:0000269 PubMed:1946430, ECO:0000269 PubMed:8041788}.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	8659555
NCBI GeneID	48
NCBI Accession #	NP_002188.1
NCBI GenBank Nucleotide #	NM_002197.2
UniProt Accession #	P21399; Q14652; Q5VZA7; D3DRK7
Molecular Weight	98,399 Da
NCBI Official Full Name	cytoplasmic aconitate hydratase
NCBI Official Synonym Full Names	aconitase 1, soluble
NCBI Official Symbol	ACO1
NCBI Official Synonym Symbols	IRP1; ACONS; IREB1; IREBP; IREBP1
NCBI Protein Information	cytoplasmic aconitate hydratase; IRE-BP 1; citrate hydro-lyase; iron regulatory protein 1; ferritin repressor protein; aconitate hydratase, cytoplasmic; iron-responsive element binding protein 1; iron-responsive element-binding protein 1
UniProt Protein Name	Cytoplasmic aconitate hydratase
UniProt Gene Name	ACO1
UniProt Synonym Gene Names	IREB1; Aconitase; IRP1; IRE-BP 1
UniProt Entry Name	ACOC_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.