

Rabbit Aconitase 1/ACO1 Polyclonal Antibody | anti-ACO1 antibody

Anti-Aconitase 1/ACO1 Antibody

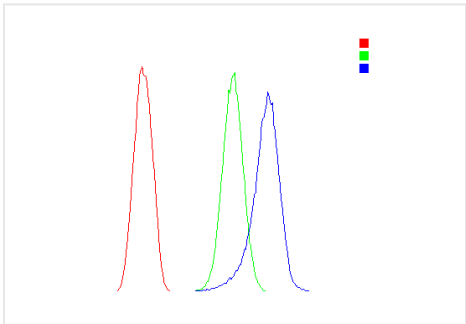
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA19267	Rabbit	Human, Mouse, Monkey, Rat	Western Blot, Immunohistochemistry, Immunocytochemistry, Immunofluorescence, Flow Cytometry, Functional Assay, ELISA

PRODUCT SYNONYMS

Aconitase 1/ACO1; Polyclonal Antibody; Anti-Aconitase 1/ACO1 Antibody; Cytoplasmic aconitate hydratase; Aconitase; Citrate hydro-lyase; Ferritin repressor protein; Iron regulatory protein 1; IRP1; Iron-responsive element-binding protein 1; IRE-BP 1; ACO1; IREB1; aconitase 1; anti-ACO1 antibody

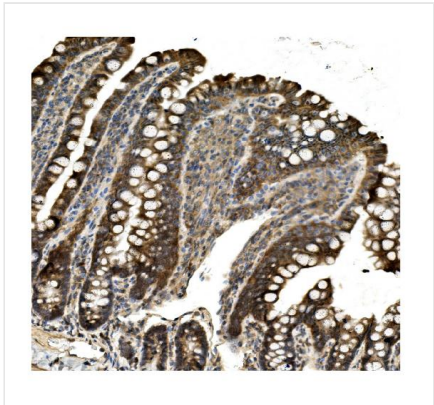
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Monkey, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for Aconitase 1/ACO1 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Applicable Applications for anti-ACO1 antibody	WB (Western Blot), IHC (Immunohistochemistry), ICC (Immunocytochemistry), IF (Immunofluorescence), FCM/FACS (Flow Cytometry), ELISA (Direct ELISA)
Application Notes	WB: 0.25-0.5ug/ml Human, Mouse, Monkey, Rat IHC-P: 0.5-1ug/ml Human, Rat ICC/IF: 4ug/ml Human FC/FACS/FCM: 1-3ug/1x106 cells Human Direct ELISA: 0.1-0.5ug/ml Human
Immunogen	E Coli-derived human Aconitase 1/ACO1 recombinant protein (Position: M1-D137).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



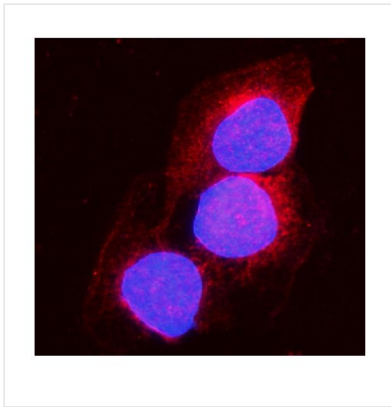
FCM (Flow Cytometry)

Figure 7. Flow Cytometry analysis of SiHa cells using anti-Aconitase 1/ACO1 antibody (AAA19267). Overlay histogram showing SiHa cells stained with AAA19267 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Aconitase 1/ACO1 Antibody (AAA19267, 1µg/1x10⁶ cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (5-10µg/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1µg/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



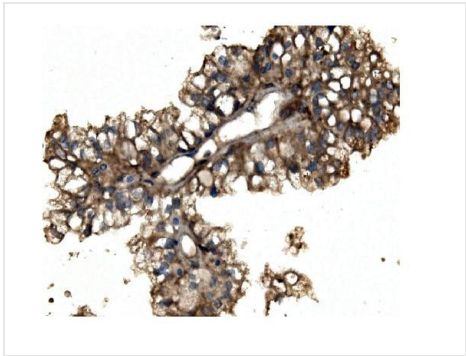
IHC (Immunohistochemistry)

Figure 5. IHC analysis of Aconitase 1/ACO1 using anti-Aconitase 1/ACO1 antibody (AAA19267). Aconitase 1/ACO1 was detected in paraffin-embedded section of rat intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1µg/ml rabbit anti-Aconitase 1/ACO1 Antibody (AAA19267) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen).



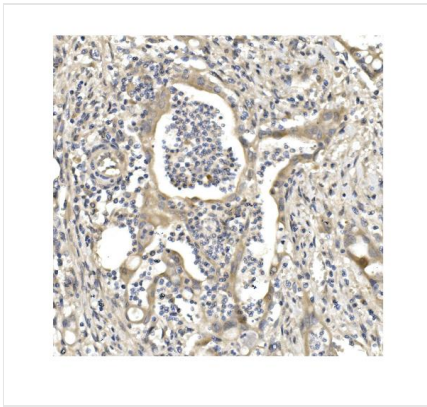
IF (Immunofluorescence)

Figure 6. IF analysis of Aconitase 1/ACO1 using anti-Aconitase 1/ACO1 antibody (AAA19267). Aconitase 1/ACO1 was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 4µg/mL rabbit anti-Aconitase 1/ACO1 Antibody (AAA19267) overnight at 4 degree C. DyLight594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



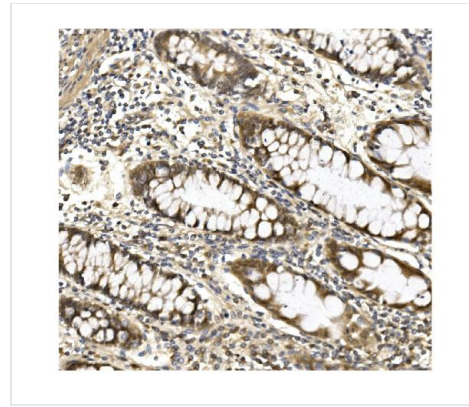
IHC (Immunohistochemistry)

Figure 4. IHC analysis of Aconitase 1/ACO1 using anti-Aconitase 1/ACO1 antibody (AAA19267). Aconitase 1/ACO1 was detected in paraffin-embedded section of human renal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1µg/ml rabbit anti-Aconitase 1/ACO1 Antibody (AAA19267) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen).



IHC (Immunohistochemistry)

Figure 3. IHC analysis of Aconitase 1/ACO1 using anti-Aconitase 1/ACO1 antibody (AAA19267). Aconitase 1/ACO1 was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1μg/ml rabbit anti-Aconitase 1/ACO1 Antibody (AAA19267) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen).



IHC (Immunohistochemistry)

Figure 2. IHC analysis of Aconitase 1/ACO1 using anti-Aconitase 1/ACO1 antibody (AAA19267). Aconitase 1/ACO1 was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1μg/ml rabbit anti-Aconitase 1/ACO1 Antibody (AAA19267) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen).

ADDITIONAL INFORMATION

Related Product Information for anti-ACO1 antibody

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.

References

1. Azevedo, E. S., Da Silva, M. C. B. O., Lima, A. M. V., Fonseca, E. F., Conseicao, M. M. Human aconitase polymorphism in three samples from northeastern Brazil. *Ann. Hum. Genet.* 43: 7-10, 1979.
2. Condo, I., Malisan, F., Guccini, I., Serio, D., Rufini, A., Testi, R. Molecular control of the cytosolic aconitase/IRP1 switch by extramitochondrial frataxin. *Hum. Molec. Genet.* 19: 1221-1229, 2010.
3. Eisenstein, R. S. Iron regulatory proteins and the molecular control of mammalian iron metabolism. *Annu. Rev. Nutr.* 20: 627-662, 2000.

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 aconitase 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.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/polyclonal/aconitase-1-aco1-antibody-western-blot-immunohistochemistry-immunocytochemistry-immunofluorescence-flow-cytometry-direct-elisa-elisa/19267>