

Rabbit anti-Human Aconitase 2 Polyclonal Antibody | anti-ACO2 antibody

Anti-Aconitase 2 Antibody, Rabbit Polyclonal

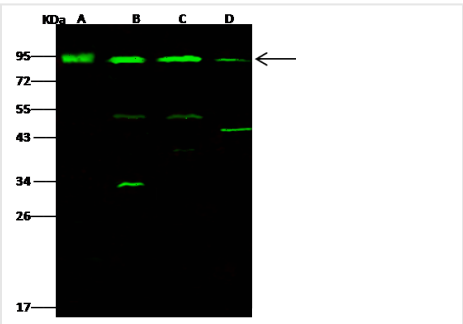
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA255265	Rabbit	Human	Immunoprecipitation, Immunohistochemistry, ELISA, Western Blot

PRODUCT SYNONYMS

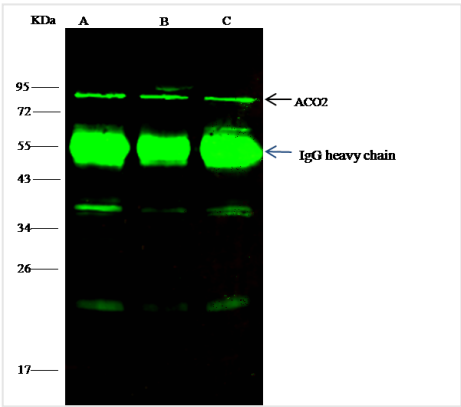
Aconitase 2; Polyclonal Antibody; Anti-Aconitase 2 Antibody; Rabbit Polyclonal; ACO2/Aconitase 2 Antibody; Rabbit PAb; Antigen Affinity Purified; aconitase 2; mitochondrial; Anti-ACONM Antibody; Anti-ICRD Antibody; anti-ACO2 antibody

PRODUCT SPECIFICATIONS

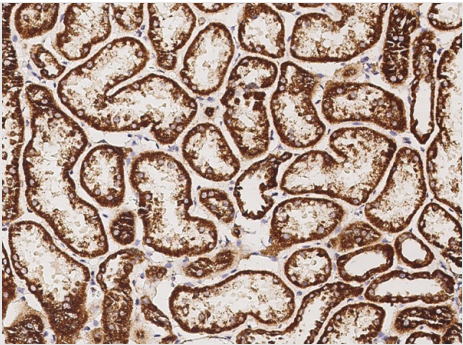
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Human ACO2/Aconitase 2
Purity/Purification	Protein A & Antigen Affinity
Form/Format	Liquid; 0.2um filtered solution in PBS
Applicable Applications for anti-ACO2 antibody	IP (Immunoprecipitation), IHC (Immunohistochemistry), ELISA, WB (Western Blot)
Immunogen	Recombinant Human ACO2/Aconitase 2 Protein
Conjugation	Unconjugated
Preparation	Produced in rabbits immunized with purified, recombinant Human ACO2/Aconitase 2 (rh ACO2/Aconitase 2). ACO2/Aconitase 2 specific IgG was purified by Human ACO2/Aconitase 2 affinity chromatography.
Preparation and Storage	This antibody can be stored at 2-8 degree C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 degree C to -80 degree C. Preservative-Free. Avoid repeated freeze-thaw cycles.



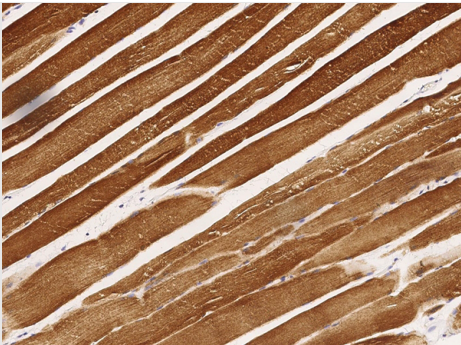
WB (Western Blot)
Anti-ACO2 rabbit polyclonal antibody at 1:500 dilution. Lane A: Rat heart tissue lysate Lane B: Rat Brain tissue lysate Lane C: Mouse Brain tissue lysate Lane D: Jurkat Whole Cell Lysate Lysates/proteins at 30 ug per lane. Secondary Goat Anti- Rabbit IgG H&L (Dylight 800) at 1/10000 dilution. Developed using the Odyssey technique. Performed under reducing conditions. Predicted band size: 85 kDa Observed band size: 92 kDa (We are unsure as to the identity of these extra bands).



IP (Immunoprecipitation)
ACO2 was immunoprecipitated using: Lane A: 0.5 mg K562 Whole Cell Lysate Lane B: 0.5 mg HeLa Whole Cell Lysate Lane C: 0.5 mg Jurkat Whole Cell Lysate 4 uL anti-ACO2 rabbit polyclonal antibody and 15 ul of 50 % Protein G agarose. Primary antibody: Anti-ACO2 rabbit polyclonal antibody, at 1:100 dilution Secondary antibody: Dylight 800-labeled antibody to rabbit IgG (H+L), at 1:5000 dilution Developed using the odssey technique. Performed under reducing conditions. Predicted band size: 85 kDa Observed band size: 85 kDa



IHC (Immunohistochemistry)
Immunochemical staining of human ACO2 in human kidney with rabbit polyclonal antibody (1:1000, formalin-fixed paraffin embedded sections).



IHC (Immunohistochemistry)
Immunochemical staining of human ACO2 in human skeletal muscle with rabbit polyclonal antibody (1:1000, formalin-fixed paraffin embedded sections).

ADDITIONAL INFORMATION

Related Product Information for anti-ACO2 antibody	A homozygous missense mutation was identified in the ACO2 gene (c.1240T>G p.Phe414Val) that segregated with HSP complicated by intellectual disability and microcephaly. Lymphoblastoid cell lines of homozygous carrier patients revealed significantly decreased activity of the mitochondrial aconitase enzyme and defective mitochondrial respiration. ACO2 encodes mitochondrial aconitase, an essential enzyme in the Krebs cycle. Recessive mutations in this gene have been previously associated with cerebellar ataxia. We found homozygous or compound heterozygous missense and frameshift mutations in the gene encoding mitochondrial aconitase (ACO2), a tricarboxylic acid cycle enzyme, catalysing interconversion of citrate into isocitrate. Unlike wild type ACO2, all mutant ACO2 proteins failed to complement the respiratory growth of a yeast aco1-deletion strain. The study shows that autosomal recessive ACO2 mutations can cause either isolated or syndromic optic neuropathy. This observation identifies ACO2 as the second gene responsible for non-syndromic autosomal recessive optic neuropathies and provides evidence for a genetic overlap between isolated and syndromic forms, giving further support to the view that optic atrophy is a hallmark of defective mitochondrial energy supply.
References	Robbins AH, et al. (1989) The structure of aconitase. Proteins. 5 (4): 289-312. Lauble H, et al. (1992) Crystal structures of aconitase with isocitrate and nitroisocitrate bound. Biochemistry. 31 (10): 2735-48. Robbins AH, et al. (1989) Structure of activated aconitase: formation of the 4Fe-4S cluster in the crystal. Proc Natl Acad Sci. 86 (10): 3639-43.

NCBI AND UNIPROT INFORMATION

NCBI GI #	6686275
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NCBI GeneID	50
UniProt Accession #	Q99798; O75809; Q5JZ41; Q6FHX0; Q8TAQ6
Molecular Weight	780
NCBI Official Full Name	Aconitate hydratase, mitochondrial
NCBI Official Synonym Full Names	aconitase 2, mitochondrial
NCBI Official Symbol	ACO2
NCBI Official Synonym Symbols	ICRD; ACONM
NCBI Protein Information	aconitate hydratase, mitochondrial; citrate hydro-lyase
UniProt Protein Name	Aconitate hydratase, mitochondrial
UniProt Gene Name	ACO2
UniProt Synonym Gene Names	Aconitase
UniProt Entry Name	ACON_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.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/aconitase-2-antibody-immunoprecipitation-immunohistochemistry-western-blot-elisa/255265>