

# ACO1 polyclonal antibody

Catalog # PAB31627 Size 100 uL

# **Applications**



### Western Blot (Cell lysate)

Western Blot analysis of human cell line U-87 MG.

	1	2	
250 -			
130 - 100 - 70 - 55 -		-	
35- 25- 15- 10-			

#### Western Blot

Western Blot analysis of (1) NIH-3T3 cell lysate (Mouse embryonic fibroblast cells), and (2) NBT-II cell lysate (Rat Wistar bladder tumour cells).



### Immunohistochemistry (Formalin/PFA-fixed paraffinembedded sections)

Immunohistochemical staining (Formalin-fixed paraffin-embedded sections) of human kidney shows strong positivity in renal tubuli.





## Immunofluorescence

Immunofluorescent staining of human cell line U-2 OS shows localization to cytosol & mitochondria. Antibody staining is shown in green.

Specification	
Product Description	Rabbit polyclonal antibody raised against partial recombinant human ACO1.
Immunogen	Recombinant protein corresponding to amino acids 800-889 of human ACO1.
Sequence	YERIHRSNLVGMGVIPLEYLPGENADALGLTGQERYTIIIPENLKPQMKVQVKLDTGKTFQAVMRFD TDVELTYFLNGGILNYMIRKMAK
Host	Rabbit
Reactivity	Human, Mouse, Rat
Form	Liquid
Purification	Antigen affinity purification
lsotype	lgG
Recommend Usage	Immunofluorescence (1-4 ug/mL) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) (1:200-1:500) Western Blot (0.4 ug/mL) The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS, pH 7.2 (40% glycerol, 0.02% sodium azide).
Storage Instruction	Store at 4°C for short term storage. For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which shoul d be handled by trained staff only.



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Gene Info — ACO1	
Entrez GenelD	<u>48</u>
Protein Accession#	<u>P21399</u>
Gene Name	ACO1
Gene Alias	ACONS, IREB1, 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 n which binds to iron-responsive elements (IREs). IREs are stem-loop structures found in the 5' UT R 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 e family of enzymes. [provided by RefSeq
Other Designations	OTTHUMP0000021176 OTTHUMP0000021177 OTTHUMP00000045233 aconitase 1 aconita te hydratase citrate hydro-lyase ferritin repressor protein iron regulatory protein 1 iron-responsive element binding protein 1



# Publication Reference

Dysregulation of IRP1-mediated iron metabolism causes gamma ray-specific radioresistance in leukemia cells.

Haro KJ, Sheth A, Scheinberg DA. PLoS One 2012 Nov; 7(11):e48841.

Application: WB-Ce, Human, HL-60 cells

#### 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
- <u>Citrate cycle (TCA cycle)</u>
- Glyoxylate and dicarboxylate metabolism
- Metabolic pathways
- <u>Reductive carboxylate cycle (CO2 fixation)</u>