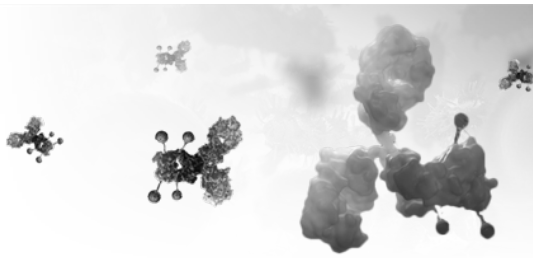

Human ACO1 blocking peptide (CDBP0296)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Blocking/Immunizing peptide for anti-ACO1/Aconitase 1 antibody
Antigen Description	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 [provided by RefSeq, Jan 2014]
Species	Human
Conjugate	Unconjugated
Applications	Apuri, BL, ELISA
Format	Lyophilized powder
Size	100 µg
Preservative	None
Storage	Shipped at ambient temperature, store at -20°C.

GENE INFORMATION

Gene Name	ACO1 aconitase 1, soluble [Homo sapiens (human)]

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Official Symbol	ACO1
Synonyms	ACO1; aconitase 1, soluble; IRP1; ACONS; HEL60; IREB1; IREBP; IREBP1; cytoplasmic aconitate hydratase; IRE-BP 1; citrate hydro-lyase; iron regulatory protein 1; ferritin repressor protein; epididymis luminal protein 60; aconitate hydratase, cytoplasmic; iron-responsive element binding protein 1; iron-responsive element-binding protein 1;
Entrez Gene ID	48
mRNA Refseq	NM_001278352.1
Protein Refseq	NP_001265281.1
UniProt ID	P21399
Chromosome Location	9p21.1
Pathway	2-Oxocarboxylic acid metabolism, organism-specific biosystem; 2-Oxocarboxylic acid metabolism, conserved biosystem; Biosynthesis of amino acids, organism-specific biosystem; Biosynthesis of amino acids, conserved biosystem; Carbon metabolism, organism-specific biosystem; Carbon metabolism, conserved biosystem; Citrate cycle (TCA cycle), organism-specific biosystem; Citrate cycle (TCA cycle), conserved biosystem; Citrate cycle (TCA cycle, Krebs cycle), organism-specific biosystem; Citrate cycle (
Function	4 iron, 4 sulfur cluster binding; RNA binding; RNA binding; aconitate hydratase activity; iron-responsive element binding; metal ion binding; protein binding;

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