

Product datasheet for **RC201857L2V**

Aconitase 1 (ACO1) (NM_002197) Human Tagged ORF Clone Lentiviral Particle

Product data:

Product Type:	Lentiviral Particles
Product Name:	Aconitase 1 (ACO1) (NM_002197) Human Tagged ORF Clone Lentiviral Particle
Symbol:	Aconitase 1
Synonyms:	ACONS; HEL60; IREB1; IREBP; IREBP1; IRP1
Mammalian Cell Selection:	None
Vector:	pLenti-C-mGFP (PS100071)
Tag:	mGFP
ACCN:	NM_002197
ORF Size:	2667 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(RC201857).
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
RefSeq:	NM_002197.1
RefSeq Size:	3561 bp
RefSeq ORF:	2670 bp
Locus ID:	48
UniProt ID:	P21399
Cytogenetics:	9p21.1
Domains:	Aconitase_C, aconitase
Protein Families:	Druggable Genome



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Protein Pathways:	Citrate cycle (TCA cycle), Glyoxylate and dicarboxylate metabolism, Metabolic pathways
MW:	98.4 kDa
Gene Summary:	<p>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]</p>