

Product datasheet for **KN201857RB**

Aconitase 1 (ACO1) Human Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 RFP-BSD donor, 1 scramble control
Donor DNA:	RFP-BSD
Symbol:	Aconitase 1
Locus ID:	48
Components:	KN201857G1 , Aconitase 1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002) KN201857G2 , Aconitase 1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002) KN201857RBD , donor DNA containing left and right homologous arms and RFP-BSD functional cassette. GE100003 , scramble sequence in pCas-Guide vector

Disclaimer: These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

RefSeq: [NM_001278352](#), [NM_002197](#), [NM_001362840](#)

UniProt ID: [P21399](#)

Synonyms: ACONS; HEL60; IREB1; IREBP; IREBP1; IRP1

Summary: 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]



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Product images:

