ALAS1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	ALAS1, Polyclonal Antibody
Full Product Name	ALAS1 Polyclonal Antibody
Product Gene Name	anti-ALAS1 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	PBS with 0.02% sodium azide, 50% glycerol, pH 7.3.
Purity/Purification	Affinity Purification
Preparation and Storage	Store at -20 degree C. Avoid freeze/thaw cycles.
Molecular Weight	12kDa; 70kDa
OMIM	125290
3D Structure	ModBase 3D Structure for P13196
Immunogen	Recombinant protein of human ALAS1 (NP_954635.1).
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-ALAS1 antibody	Western Blot (WB), Immunofluorescence (IF)
Application Notes for anti-ALAS1 antibody	WB: 1:500-1:2000 IF: 1:50-1:200
Related Product Information for anti-ALAS1 antibody	This gene encodes the mitochondrial enzyme which is catalyzes the rate-limiting step in heme (iron-protoporphyrin) biosynthesis. The enzyme encoded by this gene is the housekeeping enzyme; a separate gene encodes a form of the enzyme that is specific for erythroid tissue. The level of the mature encoded protein is regulated by heme: high levels of heme down-regulate the mature enzyme in mitochondria while low heme levels up-regulate. A pseudogene of this gene is located on chromosome 12. Alternative splicing results in multiple transcript variants encoding different isoforms.
Other Notes	Small volumes of anti-ALAS1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ALAS1 purchase	MBS8568190 is an antibody targeting ALAS1. Also known as ALAS1 Polyclonal Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ALAS1. It may not necessarily be applicable to this product.

NCBI GI #	4502025
NCBI GeneID	211
NCBI Accession #	NP_000679.1

UniProt Primary Accession #	P13196
UniProt Related Accession #	P13196
GenBank Nucleotide #	NP_000679.1
NCBI Official Full Name	5-aminolevulinate synthase, nonspecific, mitochondrial isoform 1
NCBI Official Synonym Full Names	5'-aminolevulinate synthase 1
NCBI Official Symbol	ALAS1
NCBI Official Synonym Symbols	ALAS; MIG4; ALAS3; ALASH; ALAS-H
UniProt Protein Name	5-aminolevulinate synthase, nonspecific, mitochondrial
UniProt Synonym Protein Names	5-aminolevulinic acid synthase 1; Delta-ALA synthase 1; Delta-aminolevulinate synthase 1
Protein Family	5-aminolevulinate synthase
UniProt Gene Name	ALAS1
UniProt Synonym Gene Names	ALAS3; ALASH; ALAS-H
UniProt Entry Name	HEM1_HUMAN
NCBI Protein Information	5-aminolevulinate synthase, nonspecific, mitochondrial
UniProt Comments for ALAS1	ALAS1: the mitochondrial enzyme which is catalyzes the rate-limiting step in heme (iron-protoporphyrin) biosynthesis. The enzyme encoded by this gene is the housekeeping enzyme; a separate gene encodes a form of the enzyme that is specific for erythroid tissue. The level of the mature encoded protein is regulated by heme: high levels of heme down-regulate the mature enzyme in mitochondria while low heme levels up-regulate. A pseudogene of this gene is located on chromosome 12. Multiple alternatively spliced variants, encoding the same protein, have been identified. [provided by RefSeq, Dec 2011] Protein type: Transferase; Amino Acid Metabolism - glycine, serine and threonine; Mitochondrial; Cofactor and Vitamin Metabolism - porphyrin and chlorophyll; EC 2.3.1.37 Chromosomal Location of Human Ortholog: 3p21.1 Cellular Component: nucleoplasm; mitochondrion; mitochondrial matrix; cytoplasm Molecular Function: 5-aminolevulinate synthase activity; pyridoxal phosphate binding Biological Process: mitochondrion organization and biogenesis; organelle organization and biogenesis; porphyrin metabolic process; cellular lipid metabolic process; protoporphyrinogen IX biosynthetic process; heme biosynthetic process
Research Articles on ALAS1	**1.** The mutation in CLPX inactivates its ATPase activity, resulting in coassembly of mutant and WT protomers to form an enzyme with reduced activity. The presence of low-activity CLPX increases the posttranslational stability of ALAS, causing increased ALAS protein and ALA levels, leading to abnormal accumulation of PPIX.
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