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Product datasheet for SC119768

ALAS1 (NM_000688) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALAS1 (NM_000688) Human Untagged Clone
Tag:	Tag Free
Symbol:	ALAS1
Synonyms:	ALAS; ALAS-H; ALAS3; ALASH; MIG4
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

Fully Sequenced ORF:

>OriGene ORF within SC119768 sequence for NM_000688 edited (data generated by NextGen Sequencing)

ATGGAGAGTGTTGTTCGCCGCTGCCCATTCTTATCCCGAGTCCCCCAGGCCTTTCTGCAG
AAAGCAGGCAAATCTCTGTTGTTCTATGCCCAAAACTGCCCCAAGATGATGGAAGTTGGG
GCCAAGCCAGCCCCTCGGGCATTGTCCACTGCAGCAGTACACTACCAACAGATCAAAGAA
ACCCCTCCGGCCAGTGAGAAAGACAAAACTGCTAAGGCCAAGGTCCAACAGACTCCTGAT
GGATCCCAGCAGAGTCCAGATGGCACACAGCTTCCGTCTGGACACCCCTTGCCTGCCACA
AGCCAGGGCACTGCAAGCAAATGCCCTTTCCTGGCAGCACAGATGAATCAGAGAGGCAGC
AGTGTCTTCTGCAAAGCCAGTCTTGAGCTTCAGGAGGATGTGCAGGAAATGAATGCCGTG
AGGAAAGAGGTTGCTGAAACCTCAGCAGGCCCCAGTGTGGTTAGTGTGAAAACCGATGGA
GGGGATCCCAGTGGACTGCTGAAGAACTTCCAGGACATCATGCAAAAGCAAAGACCAGAA
AGAGTGTCTCATCTTCTTCAAGATAACTTGCCAAAATCTGTTTCCACTTTTCAGTATGAT
CGTTTCTTTGAGAAAAAAATTGATGAGAAAAAGAATGACCACACCTATCGAGTTTTTAAA
ACTGTGAACCGGCGAGCACACATCTTCCCCATGGCAGATGACTATTCAGACTCCCTCATC
ACCAAAAAGCAAGTGTCAGTCTGGTGCAGTAATGACTACCTAGGAATGAGTCGCCACCCA
CGGGTGTGTGGGGCAGTTATGGACACTTTGAAACAACATGGTGCTGGGGCAGGTGGTACT
AGAAATATTTCTGGAACTAGTAAATTCCATGTGGACTTAGAGCGGGAGCTGGCAGACCTC
CATGGGAAAGATGCCGCACTCTTGTTTTCCTCGTGCTTTGTGGCCAATGACTCAACCCTC
TTCACCCTGGCTAAGATGATGCCAGGCTGTGAGATTTACTCTGATTCTGGGAACCATGCC
TCCATGATCCAAGGGATTCGAAACAGCCGAGTGCCAAAGTACATCTTCCGCCACAATGAT
GTCAGCCACCTCAGAGAACTGCTGCAAAGATCTGACCCCTCAGTCCCCAAGATTGTGGCA
TTTGAAACTGTCCATTCAATGGATGGGGCGGTGTGCCCACTGGAAGAGCTGTGTGATGTG
GCCCATGAGTTTGGAGCAATCACCTTCGTGGATGAGGTCCACGCAGTGGGGCTTTATGGG
GCTCGAGGCGGAGGGATTGGGGATCGGGATGGAGTCATGCCAAAAATGGACATCATTTCT
GGAACACTTGGCAAAGCCTTTGGTTGTGTTGGAGGGTACATCGCCAGCACGAGTTCTCTG
ATTGACACCGTACGGTCCTATGCTGCTGGCTTCATCTTCACCACCTCTCTGCCACCCATG
CTGCTGGCTGGAGCCCTGGAGTCTGTGCGGATCCTGAAGAGCGCTGAGGGACGGGTGCTT
CGCCGCCAGCACCAGCGCAACGTCAAACTCATGAGACAGATGCTAATGGATGCCGGCCTC
CCTGTTGTCCACTGCCCCAGCCACATCATCCCTGTGCGGGTTGCAGATGCTGCTAAAAAC
ACAGAAGTCTGTGATGAACTAATGAGCAGACATAACATCTACGTGCAAGCAATCAATTAC
CCTACGGTGCCCCGGGGAGAAGAGCTCCTACGGATTGCCCCCACCCCTCACCACACACCC
CAGATGATGAACTACTTCCTTGAGAATCTGCTAGTCACATGGAAGCAAGTGGGGCTGGAA
CTGAAGCCTCATTCCTCAGCTGAGTGCAACTTCTGCAGGAGGCCACTGCATTTTGAAGTG
ATGAGTGAAAGAGAGAAGTCCTATTTCTCAGGCTTGAGCAAGTTGGTATCTGCTCAGGCC
TGA

Clone variation with respect to NM_000688.4

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_000688 unedited
GTATTTGTATACGACTCCTATAGGGCGGCCGCGAATTCGCACGAGGCGCGGCCTGAGGCT
GCTCCCGGACAAGGGCAACGAGCGTTTCGTTTGGACTTCTCGACTTGAGTGCCCGCCTCC
TTCGCCGCCGCCTCTGCAGTCCTCAGCGCAGTCTTTCCACAGGAGCCAGCATACTTCCTG
AACATGGAGAGTGTTGTTCGCCGCTGCCCATTCTTATCCCGAGTCCCCCAGGCCTTTCTG
CAGAAAGCAGGCAAATCTCTGTTGTTCTATGCCCAAAACTGCCCCAAGATGATGGAAGTT
GGGGCCAAGCCAGCCCCTCGGGCATTGTCCACTGCAGCAGTACACTACCAACAGATCAAA
GAAACCCCTCCGGCCAGTGAGAAAGACAAAACTGCTAAGGCCAAGGTCCAACAGACTCCT
GATGGATCCCAGCAGAGTCCAGATGGCACACAGCTTCCGTCTGGACACCCCTTGCCTGCC
ACAAGCCAGGGCACTGCAAGCAAATGCCCTTTCCTGGCAGCACAGATGAATCAGAGAGGC
AGCAGTGTCTTCTGCAAAGCCAGTCTTGAGCTTCAGGAGGATGTGCAGGAAATGAATGCC
GTGAGGAAAGAGGTTGCTGAAACCTCAGCAGGCCCCAGTGTGGTTAGTGTGAAAACCGAT
GGAGGGGATCCCAGTGGACTGCTGAAGAACTTCCAGGACATCATGCAAAAGCANAGACCA
GANAGAGTGTCTCATCTTCTTCAAGATACTTGCCAAATCTGTTTCCACTTTCAGTATGAT
CGTTTCTTTGAGACAAAAATGATGAGAAAAAGATGACCCACCTATCGAGATCTTAAACTG
TGACCTGGCGAGCCACATCTTCCCCTGCCAATGATATTCAGACTCCTCACACCAAAAGCA
GTGTCAGTCTGTTGCAGTATGACTACCTAGAATGAGTCGCCACCCAGGGTGTGG

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_000688 unedited
CGGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTATTTCCAGGACTATGTTTT
TACTATAGATTAAAATTTAATATAACTTAATTCACATATAAAGACAACTCTGAAGACCAT
CTGGATATGATAATGGCCTGGGGTTAAGTGAAATAATTGAGGTCATGCTCAGGCCTGAGC
AGATACCAACTTGCTCAAGCCTGAGAAATAGGACTTCTCTCTTTCACTCATCACTTCAAA
ATGCAGTGGCCTCCTGCAGAAGTTGCACTCAGCTGAGGAATGAGGCTTCAGTTCCAGCCC
CACTTGCTTCCATGTGACTAGCAGATTCTCAAGGAAGTAGTTCATCATCTGGGGTGTGTG
GTGAGGGGTGGGGGCAATCCGTAGGAGCTCTTCTCCCCGGGGCACCGTAGGGTAATTGAT
TGCTTGCACGTAGATGTTATGTCTGCTCATTAGTTCATCACAGACTTCTGTGTTTTTAGC
AGCATCTGCAACCCGCACAGGGATGATGTGGCTGGGGCAGTGGACAACAGGGAGGCCGGC
ATCCATTAGCATCTGTCTCATGAGTTTGACGTTGCGCTGGTGCTGGCGGCGAAGCACCCG
TCCCTCAGCGCTCTTCAGGATCCGCACAGACTCCAGGGCTCCAGCCAGCAGCATGGGTGG
CAGAGAGGTGGTGAAGATGAAGCCAGCAGCATAGGACCGTACGGTGTCAATCAGAGAACT
CGTGCTGGCGATGTACCCTCCACACACCAAGGCTNTTGCCAGTGTCCAGAATGATGTCCA
TTTTTGCATGACTCATCCCGATCCCATCCCCTCGCTCGGCCCATAAGCCCACTGCGTGAC
CTATCACGAGGTGANTGCTCAACTATGGCCAATACACAGTTTTCGGGGCCACCGCCTCTT
GATGGACGTTCATGCCATCTGGACGAGGGCAACTTTCGAGTTTGAGGGT

Restriction Sites: NotI-NotI

ACCN: NM_000688

Insert Size: 2290 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_000688.4, NP_000679.1
RefSeq Size:	2407 bp
RefSeq ORF:	1923 bp
Locus ID:	211
UniProt ID:	P13196
Cytogenetics:	3p21.2
Domains:	ALA_synthase, aminotran_1_2
Protein Pathways:	Glycine, serine and threonine metabolism, Metabolic pathways, Porphyrin and chlorophyll metabolism
Gene Summary:	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. [provided by RefSeq, Jan 2015] Transcript Variant: This variant (1) represents the longest transcript. Variants 1, 2, and 3 encode the same protein.