

Product datasheet for **RG219079**

ALAS2 (NM_000032) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALAS2 (NM_000032) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ALAS2
Synonyms:	ALAS-E; ALASE; ANH1; ASB; SIDBA1; XLDPP; XLEPP; XLSA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RG219079 representing NM_000032
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGTGACTGCAGCCATGCTGCTACAGTGTGCCAGTGCTTGCCGGGGCCCCACAAGCCTCTAGGCA
 AGGTGGTTAAGACTCACCAAGTTCCTGTTGGTATTGGACGCTGCCATCCTGGCTACCCAAGGACCAAA
 CTGTTCTCAAATCCACCTTAAGGCAACAAAGGCTGGAGGAGATTCTCCATCTTGGCGAAGGGCCACTGT
 CCCTTCATGCTGTCGGAAGTCCAGGATGGGAAGAGCAAGATTGTGCAGAAGGCAGCCCCAGAAGTCCAGG
 AAGATGTGAAGGCTTTCAAGACAGATCTGCCTAGCTCCCTGGTCTCAGTCAGCCTAAGGAAGCCATTTTC
 CGGTCCCCAGGAGCAGGAGCAGATCTCTGGGAAGGTCACACACCTGATTCAGAACAATATGCCTGGAAAC
 TATGTCTTCAGTTATGACCAGTTTTTCAGGGACAAGATCATGGAGAAGAAACAGGATCACACCTACCGTG
 TGTTCAAGACTGTGAACCGCTGGGCTGATGCATATCCCTTGGCCAACTTTCTTTGAGGCATCTGTGGC
 CCAAAGGATGTGTCGCTGGTGTAGTAATGATTACCTGGGCATGAGCCGACACCTCAGTCTTGCAA
 GCCACACAGGAGACCCTGCAGCGTCATGGTGTGGAGCTGGTGGCACCCGCAACATCTCAGGCACCAAGTA
 AGTTTTATGTGGAGCTTGAAGGAGCTGGCTGAGCTGCACCAGAAGGACTCAGCCCTGCTCTTCTCCTC
 CTGCTTTGTTGCCAATGACTCTACTCTTTCACCTTGGCCAAGATCCTGCCAGGGTGCAGATTTACTCA
 GACGCAGGCAACCATGCTTCCATGATCCAAGGTATCCGTAACAGTGGAGCAGCCAAGTTTGTCTTCAGGC
 ACAATGACCCTGACCACCTAAAGAACTTCTAGAGAAGTCAACCCTAAGATACCCAAAATTGTGGCCTT
 TGAGACTGTCCACTCCATGGATGGTGCATCTGTCCCCTCGAGGAGTTGTGTGATGTGTCCCACCAAGTAT
 GGGGCCCTGACCTTCGTGGATGAGGTCCATGCTGTAGGACTGTATGGGTCCCGGGGCGCTGGGATGGGG
 AGCGTGATGGAATTATGCATAAGATTGACATCATCTCTGGAACCTTGGCAAGGCCTTTGGCTGTGTGGG
 CGGCTACATTGCCAGCACCCGCTGACTTGGTGGACATGGTGGCTCCTATGCTGCAGGCTTCATCTTTACC
 ACTTCTGCCCCCATGGTGTCTCTGGAGCTCTAGAATCTGTGCGGCTGCTCAAGGGAGAGGAGGGCC
 AAGCCCTGAGGCGAGCCACCAGCGCAATGTCAAGCACATGCGCCAGCTACTCATGGACAGGGGCTTCC
 TGTCTCCCTGCCCCAGCCACATCATCCCATCCGGTGGGCAATGCAGCACTCAACAGCAAGCTCTGT
 GATCTCTGCTCTCAAGCATGGCATCTATGTGCAGGCCATCACTACCCAACTGTCCCCGGGGTGAAG
 AGCTCTGCGCTTGGCACCCCTCCCCCACCACAGCCCTCAGATGATGGAAGATTTTGTGGAGAAGCTGCT
 GCTGGCTTGGACTGCGGTGGGGTGGCCCTCCAGGATGTGTCTGTGGCTGCCTGCAATTTCTGTCGCGGT
 CCTGTACACTTTGAGCTCATGAGTGAGTGGGAACGTTCTACTTCGGGAACATGGGGCCCCAGTATGTCA
 CCACCTATGCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG219079 representing NM_000032
 Red=Cloning site Green=Tags(s)

MVTAAMLLQCCPVLARGPTSLLGKVVKTHQFLFGIGRCPILATQGPNCQIHLKATKAGGDSPSWAKGHC
 PFMLSELQDGKSKIVQKAPEVQEDVKAFKTDLPSSLVSVSLRPFSGPQEQEQISGKVTHLIQNNMPGN
 YVFSYDQFFRDKIMEKKQDHTYRVFKTVNRWADAYPFAQHFFEASVASKDVSVWCSNDYLGMSRHPQVLQ
 ATQETLQRHGAGAGGTRNISGTSKFHVELEQELAEHQKDSALLFSSCFVANDSTLFTLAKILPGCEIYS
 DAGNHASMIQGIIRNSGAAKFVFRHNDPDHLKLLLEKSNPKIPKIVAFETVHSMGDAICPLEELCDVSHQY
 GALTFVDEVHAVGLYGSRGAGIGERDGMHKIDIIISGTLGKAFGCVGGYIASTRDLVDMVRSYAAGFI
 TSLPPMVLSGALESVRLKGEEQALRRAHQNRNVKHMRLQLLMDRGLPVIPCPSHIPIRVGNAALNSKLC
 DLLL SKHGIYVQAINYPTVPRGEELRLAPSPHHSPQMMEDFVEKLLLAWTAVGLPLQDVSVAACNFCRR
 PVHFELMSEWERSYFGNMGPQYVTTYA

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_000032

ORF Size: 1761 bp

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.

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_000032.1](#), [NP_000023.1](#)

RefSeq Size: 1937 bp

RefSeq ORF: 1764 bp

Locus ID: 212

UniProt ID: [P22557](#)

Cytogenetics: Xp11.21

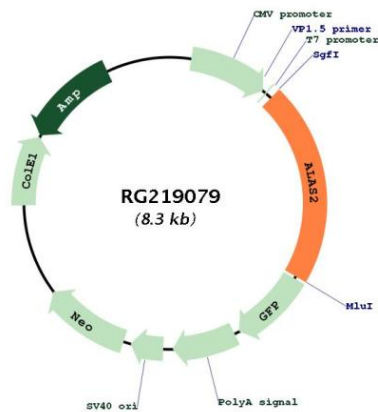
Domains: ALA_synthase, aminotran_1_2

Protein Families: Druggable Genome

Protein Pathways: Glycine, serine and threonine metabolism, Metabolic pathways, Porphyrin and chlorophyll metabolism

Gene Summary: The product of this gene specifies an erythroid-specific mitochondrially located enzyme. The encoded protein catalyzes the first step in the heme biosynthetic pathway. Defects in this gene cause X-linked pyridoxine-responsive sideroblastic anemia. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG219079