

## Product datasheet for **RC219079**

### ALAS2 (NM\_000032) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ALAS2 (NM_000032) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ALAS2
Synonyms:	ALAS-E; ALASE; ANH1; ASB; SIDBA1; XLDPP; XLEPP; XLSA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC219079 representing NM\_000032  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGTGACTGCAGCCATGCTGCTACAGTGTGCCAGTGCTTGCCCGGGGCCCAAGCCTCTAGGCA  
 AGGTGGTTAAGACTCACCAGTTCCTGTTTGGTATTGGACGCTGTCCATCCTGGCTACCCAAGACCAAA  
 CTGTTCTCAAATCCACCTTAAGGCAACAAAGGCTGGAGGAGATTCTCCATCTTGGCGAAGGGCCACTGT  
 CCCTTCATGCTGTCGGAATCCAGGATGGGAAGAGCAAGATTGTGCAGAAGGCAGCCCCAGAAGTCCAGG  
 AAGATGTGAAGGCTTTCAAGACAGATCTGCCTAGCTCCCTGGTCTCAGTCAGCCTAAGGAAGCCATTTTC  
 CGGTCCCCAGGAGCAGGAGCAGATCTCTGGGAAGGTCACACACCTGATTCAGAACAATATGCCTGGAAAC  
 TATGTCTTCAGTTATGACCAGTTTTTCAGGGACAAGATCATGGAGAAGAAACAGGATCACACCTACCGTG  
 TGTTCAAGACTGTGAACCGCTGGGCTGATGCATATCCCTTGCCCAACATTTCTCTGAGGCATCTGTGGC  
 CTAAGGATGTGTCGGTCTGGTGTAGTAATGATTACCTGGGCATGAGCCGACACCTCAGTCTTGCAA  
 GCCACACAGGAGACCCTGCAGCGTCATGGTGTGGAGCTGGTGGCACCCGCAACATCTCAGGCACCAAGTA  
 AGTTTTATGTGGAGCTTGAGCAGGAGCTGGCTGAGCTGCACCAGAAGGACTCAGCCCTGCTCTTCTCCTC  
 CTGCTTTGTTGCCAATGACTCTACTCTTTCACCTTGCCCAAGATCCTGCCAGGGTGCAGATTTACTCA  
 GACGCAGGCAACCATGCTTCCATGATCCAAGGTATCCGTAACAGTGGAGCAGCCAAGTTTGTCTTCAGGC  
 ACAATGACCCTGACCACCTAAAGAACTTCTAGAGAAGTCAACCCTAAGATACCCAAAATTGTGGCCTT  
 TGAGACTGTCCACTCCATGGATGGTGCCATCTGTCCCCTCGAGGAGTTGTGTGATGTGTCCACCAGTAT  
 GGGGCCCTGACCTTCGTGGATGAGGTCCATGCTGTAGGACTGTATGGGTCCCGGGGCGCTGGGATTGGGG  
 AGCGTGATGGAATTATGCATAAGATTGACATCATCTCTGGAACCTTGGCAAGGCCTTTGGCTGTGTGGG  
 CGGCTACATTGCCAGCACCCGCTGACTTGGTGGACATGGTGCCTCTATGCTGCAGGCTTCATCTTTACC  
 ACTTCTCTGCCCCCATGGTGTCTCTGGAGCTCTAGAATCTGTGCGGCTGCTCAAGGGAGAGGAGGGCC  
 AAGCCCTGAGGCGAGCCACCAGCGCAATGTCAAGCACATGCGCCAGCTACTCATGGACAGGGGCTTCC  
 TGTCTCCCTGCCCCAGCCACATCATCCCATCCGGTGGGCAATGCAGCACTCAACAGCAAGCTCTGT  
 GATCTCTGCTCTCAAGCATGGCATCTATGTGCAGGCCATCACTACCCAACTGTCCCCGGGGTGAAG  
 AGCTCTGCGCTTGGCACCCCTCCCCACCACAGCCCTCAGATGATGGAAGATTTTGTGGAGAAGCTGCT  
 GCTGGCTTGGACTGCGGTGGGGTGCCTCCAGGATGTGTCTGTGGCTGCCTGCAATTTCTGTCGCGGT  
 CCTGTACTTTGAGCTCATGAGTGAGTGGGAACGTTCTACTTCGGGAACATGGGGCCCCAGTATGTCA  
 CCACCTATGCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC219079 representing NM\_000032  
 Red=Cloning site Green=Tags(s)

MVTAAMLLQCCPVLARGPTSLLGKVVKTHQFLFGIGRCPILATQGPNCQIHLKATKAGDSPSWAKGHC  
 PFMLSELQDGKSKIVQKAPEVQEDVKAFKTDLPSSLVSVSLRPFSGPQEQEISGKVTHLIQNNMPGN  
 YVFSYDQFFRDKIMEKKQDHTYRVFKTVNRWADAYPFAQHFSEASVASKDVSVWCSNDYLGMSRHPVLQ  
 ATQETLQRHGAGAGGTRNISGTSKFHVELEQELAEHQKDSALLFSSCFVANDSTLFTLAKILPGCEIYS  
 DAGNHASMIQIRNSGAAKFVFRHNDPDLKLLLEKSNPKIPKIVAFETVHSMGAIKPLEELCDVSHQY  
 GALTFVDEVHAVGLYGSRGAGIGERDGMHKIDIISGTLGKAFGCVGGYIASTRDLVDMVRSYAAGFI  
 TSLPPMVLSGALESVRLKGEEQALRRHQKRNKMRQLLMDRGLPVI PCPSHIPIRVGNAALNSKLC  
 DLLL SKHGIYVQAINYPTVPRGEELLRLAPSPHHPQMMEDFVEKLLLAWTAVGLPLQDVSAACNFCRR  
 PVHFELMSEWERSYFGNMGPOYVTTYA

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk8068\\_e07.zip](https://cdn.origene.com/chromatograms/mk8068_e07.zip)

**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\\_000032.5](#)

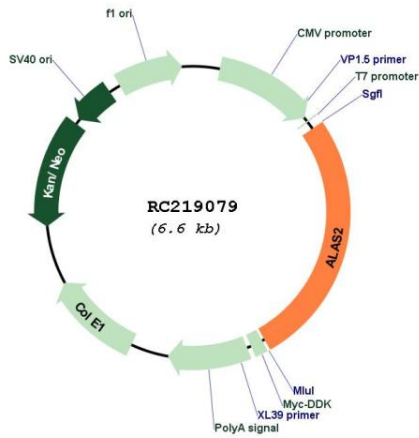
**RefSeq Size:** 1937 bp

**RefSeq ORF:** 1764 bp

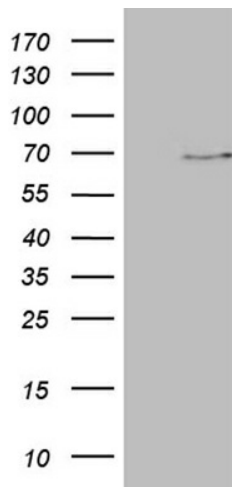
**Locus ID:** 212

**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  
**MW:** 64.63 kDa  
**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]

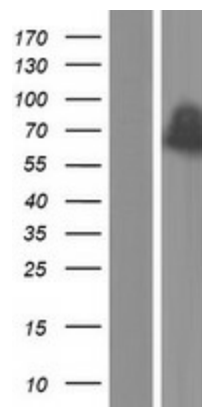
**Product images:**



Circular map for RC219079



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ALAS2 (Cat# RC219079, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ALAS2 (Cat# [TA810000])(1:2000). Positive lysates [LY424966] (100ug) and [LC424966] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424966]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC219079 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).