

## Product datasheet for **RG206567**

### ALAS2 (NM\_001037967) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ALAS2 (NM_001037967) 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)



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**ORF Nucleotide Sequence:**

>RG206567 representing NM\_001037967  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGAGAGGGGGAGAGGTTGCTCTGGGATGGAACAAGAAAAAGAGTTGTTTTGTGAGGACTTTAGGTTCA  
 AGATGGTGACTGCAGCCATGCTGCTACAGTGCTGCCAGTGCTTGCCCGGGGCCCAACAAGCCTCCTAGG  
 CAAGGTGGTTAAGACTCACCACTTCTGTTTGGTATTGGACGCTGTCCATCCTGGCTACCAAGGACCA  
 AACTGTTCTCAAATCCACCTTAAGGCAACAAGGCTGGAGGAGATTCTCCATCTTGGGCGAAGGGCCACT  
 GTCCTTCATGCTGTCGGAACCTCAGGATGGGAAGAGCAAGATTGTGAGAAGGCAGCCCCAGAAGTCCA  
 GGAAGATGTGAAGGCTTCAAGACAGGAACTATGTCTTCAGTTATGACCAAGTTTTTCAGGGACAAGATC  
 ATGGAGAAGAAACAGGATCACACCTACCGTGTGTTCAAGACTGTGAACCGCTGGGCTGATGCATACCTT  
 TTGCCAACATTTCTCTGAGGCATCTGTGGCCTCAAAGGATGTGTCGGTCTGGTGTAGTAATGATTACCT  
 GGGCATGAGCCGACACCCTCAGGCTTGAAGCCACACAGGAGACCCTGCAGCGTCATGGTGTGGAGCT  
 GGTGGCACCCGCAACATCTCAGGCACCAGTAAGTTTCATGTGGAGCTTGAGCAGGAGCTGGCTGAGCTGC  
 ACCAGAAGGACTCAGCCCTGCTCTTCTCCTCTGCTTTGTTGCCAATGACTCTACTCTCTTCACCTTGGC  
 CAAGATCCTGCCAGGTGCGAGATTTACTCAGACGCAGGCAACCATGCTTCCATGATCCAAGGTATCCGT  
 AACAGTGGAGCAGCCAAGTTTGTCTTACAGGCACAATGACCCTGACCACCTAAAGAAAATTCTAGAGAAGT  
 CTAACCCTAAGATACCCAAAATTGTGGCCTTTGAGACTGTCCACTCCATGGATGGTGCCATCTGTCCCT  
 CGAGGAGTTGTGTGATGTGTCCACCAGTATGGGGCCCGACCTTCGTGGATGAGGTCCATGCTGTAGGA  
 CTGTATGGGTCGCGGGCGCTGGGATTGGGGAGCGTGATGGAATTATGCATAAGATTGACATCATCTCTG  
 GAACTCTTGGCAAGGCTTTGGCTGTGTGGCGGCTACATTGCCAGCACCCGCTGACTTGGTGGAGCTGGT  
 CGGCTCCTATGCTGCAGGCTTCACTTTACCACCTTCTCTGCCCCCATGGTGTCTCTGGAGCTTAGAA  
 TCTGTGCGGCTGCTCAAGGGAGAGGAGGGCCAAGCCCTGAGGCGAGCCACCAGCGCAATGTCAAGCACA  
 TGCGCCAGCTACTCATGGACAGGGGCTTCTGTGATCCCTGCCCCAGCCACATCATCCCCATCCGGGT  
 GGGCAATGCAGCACTCAACAGCAAGCTCTGTGATCTCTGCTCTCCAAGCATGGCATCTATGTGCAGGCC  
 ATCAACTACCAACTGTCCCGGGGTGAAGAGCTCTGCGCTTGGCACCCCTCCCCCACCACAGCCCTC  
 AGATGATGGAAGATTTTGTGGAGAAGCTGCTGCTGGCTTGGACTGCGGTGGGGCTGCCCTCCAGGATG  
 GTCTGTGGCTGCCTGCAATTTCTGTGCGCGTCTGTACACTTTGAGCTCATGAGTGAGTGGGAACGTTC  
 TACTTCGGGAACATGGGGCCCCAGTATGTACCACCTATGCC

**ACGCGT**ACGCGGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>RG206567 representing NM\_001037967  
 Red=Cloning site Green=Tags(s)

MRGGEVALGWNKKRFLCEDFRFKMVTAAAMLLQCCPVLARGPTSLLGKVVKTHQFLFGIGRCPILATQGP  
 NCSQIHLKATKAGDPSWAKGHCFMSELQDGKSKIVQKAPEVQEDVKAFKTNVYVFSYDQFFRDKI  
 MEKKQDHTYRVFKTVNRWADAYPFAQHFSEASVASKDVSVWCSNDYLGMSRHPQVLQATQETLQRHGVA  
 GGTRNISGTSKFHVELEQELAEHLQKDSALLFSSCFVANDSTLFTLAKILPGCEIYSDAGNHASMIQGIR  
 NSGAAKFVFRHNDPDLKLLLEKSNPKIPKIVAFETVHSMGAIICPLEELCDVSHQYALTFVDEVHAVG  
 LYGSRGAGIGERDGMHKIDIISGTLGKAFGCVGGYIASTRDLVDMVRSYAAGFIFTTSLPPMVLSGALE  
 SVRLKGEEQALRRAHQNRVNHMRQLLMDRGLPVI PCPSHIIPIRVGNAAALNSKLDLLL SKHGIYVQA  
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 YFGNMGPQYVTTYA

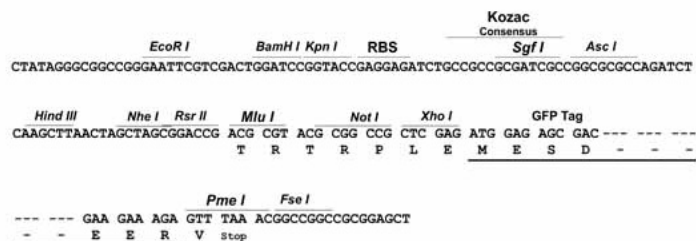
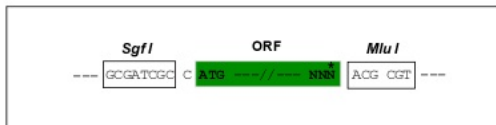
**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

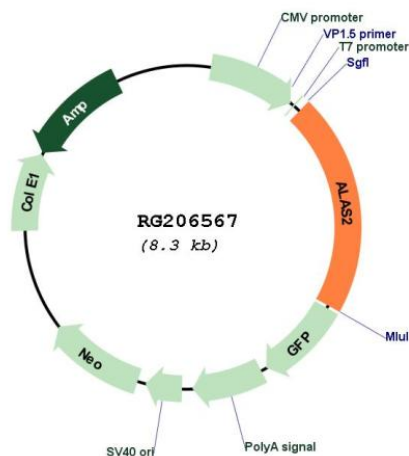
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM\_001037967  
 ORF Size: 1650 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001037967.1</a> , <a href="#">NP_001033056.1</a>
<b>RefSeq Size:</b>	1830 bp
<b>RefSeq ORF:</b>	1653 bp
<b>Locus ID:</b>	212
<b>UniProt ID:</b>	<a href="#">P22557</a>
<b>Cytogenetics:</b>	Xp11.21
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Glycine, serine and threonine metabolism, Metabolic pathways, Porphyrin and chlorophyll metabolism
<b>Gene Summary:</b>	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]