

Product datasheet for **RG201545**

ALAD (NM_000031) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALAD (NM_000031) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ALAD
Synonyms:	ALADH; PBGS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG201545 representing NM_000031 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCCTGTGCCACTGGCCACGCCATGCAGCCCCAGTCCGTTCTGCACAGCGGCTACTTCCACCCAC
TACTTCGGGCCTGGCAGACAGCCACCACCCTCAATGCCTCCAACCTCATCTACCCCATCTTTGTCAC
GGATGTTCTGATGACATACAGCCTATCACCAGCCTCCAGGAGTGCCAGGTACGGTGTGAAGCGGCTG
GAAGAGATGCTGAGGCCCTTGGTGAAGAGGGCCTACGCTGTGTCTTGATCTTTGGCGTCCCCAGCAGAG
TTCCCAAGGACGAGCGGGTTCCGAGCTGACTCCGAGGAGTCCCGAGCTATTGAGGCAATCCATCTGTT
GAGGAAGACCTTCCCAACCTCCTGGTGGCCTGTGATGTCTGCCTGTGTCCCTACACCTCCCATGGTCAC
TGCGGGCTCCTGAGTGAAAACGGAGCATTCCGGGCTGAGGAGAGCCGCCAGCGGCTGGCTGAGGTGGCAT
TGGCGTATGCCAAGGCAGGATGTCAGGTGGTAGCCCCGTCGGACATGATGGATGGACGCGTGAAGCCAT
CAAAGAGGCCCTGATGGCACATGGACTTGGCAACAGGGTATCGGTGATGAGCTACAGTGCCAAATTTGCT
TCCTGTTTCTATGGCCCTTCCGGGATGCAGCTAAGTCAAGCCCAGCTTTTGGGGACCGCGCTGCTACC
AGCTGCCCCCTGGAGCACGAGGCCTGGCTCTCCGAGCTGTGGACCGGGATGTACGGGAAGGAGCTGACAT
GCTCATGGTGAAGCCGGGAATGCCCTACCTGGACATCGTGCGGGAGGTAAAGGACAAGCACCTGACCTC
CCTCTCGCGTGTACCAGTCTCTGGAGAGTTTGCCATGCTGTGGCATGGAGCCCAGGCCGGGCATTTG
ATCTCAAGGCTGCCGTAAGGAGGCTACTGGAGGCCATGACTGCCTCCGAGAGCAGGTGCTGACATCATCACCTA
CTACACCCGAGCTGCTGCAGTGGCTGAAGGAGGAA

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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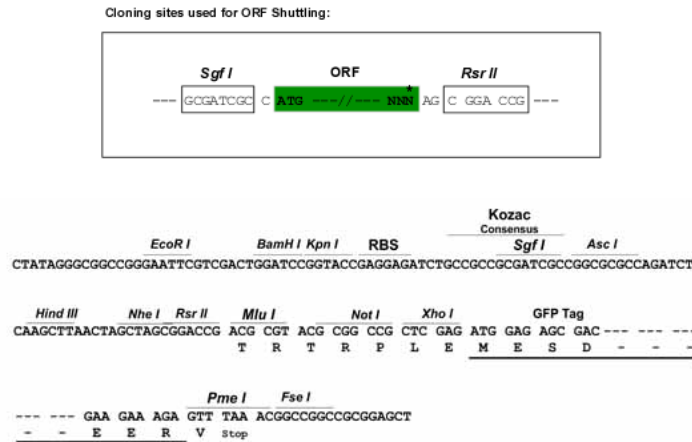
Protein Sequence: >RG201545 representing NM_000031
 Red=Cloning site Green=Tags(s)

MPLCPLAHAMQPQSVLHSGYFHPLLRWQTATTTLNASNLIYPIFVTDVPPDIQPITSLPGVARYGVKRL
 EEMLRPLVEEGLRCVLI FGVP SRVPKDERGSAADSEESPAIEA IHL LRKTFPNLLVACDVCLCPYTS HGH
 CGLLSENGAFRAEESRQRLAEVALAYAKAGCQVVAPSDMMDGRVEAIKEALMAHGLGNRVSVMSYSAKFA
 SCFYGPFRDAAKSSPAFGDRRCYQLPPGARGLALRAVDRDVREGADMLMVKPGMPYLDIVREVKDKHPDL
 PLAVYHVSGEFAMLWHGAQAGAFDLKAAVLEAMTAFRRAGADIIITYYTPQLLQWLKEE

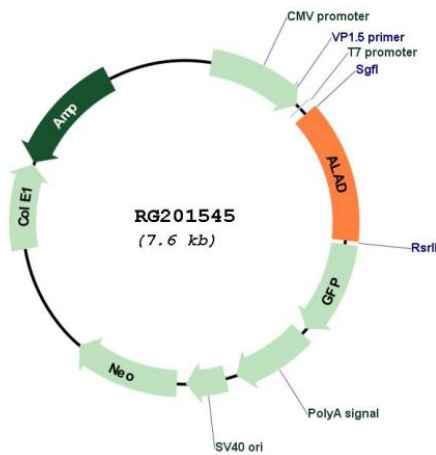
SGPTRRRLE - GFP Tag - V

Restriction Sites: SgfI-RsrII

Cloning Scheme:



Plasmid Map:



ACCN: NM_000031

ORF Size: 1017 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:	<ol style="list-style-type: none">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_000031.4 , NP_000022.2
RefSeq Size:	3151 bp
RefSeq ORF:	993 bp
Locus ID:	210
UniProt ID:	P13716
Cytogenetics:	9q32
Domains:	ALAD
Protein Families:	Druggable Genome
Protein Pathways:	Metabolic pathways, Porphyrin and chlorophyll metabolism
Gene Summary:	The ALAD enzyme is composed of 8 identical subunits and catalyzes the condensation of 2 molecules of delta-aminolevulinate to form porphobilinogen (a precursor of heme, cytochromes and other hemoproteins). ALAD catalyzes the second step in the porphyrin and heme biosynthetic pathway; zinc is essential for enzymatic activity. ALAD enzymatic activity is inhibited by lead and a defect in the ALAD structural gene can cause increased sensitivity to lead poisoning and acute hepatic porphyria. Alternative splicing of this gene results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Dec 2015]