

Product datasheet for **RG215448**

ALS2 (NM_020919) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALS2 (NM_020919) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ALS2
Synonyms:	ALS2CR6; ALSJ; IAHSP; PLSJ
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG215448 representing NM_020919 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGACTCAAAGAAGAGAAGCTCAACAGAGGCAGAAGGATCCAAGGAAAGAGGCCTGGTCCATATCTGGC
AGGCAGGATCCTTTCCATAACACCAGAGAGATTGCCAGGCTGGGGAGGAAAGACTGTTTTGCAGGCAGC
CCTCGGAGTGAACATGGAGTTCTTCTGACTGAAGATGGTGAGGTCTACAGCTTTGGGACTTCCCTGG
AGAAGTGGACCAGTGGAGATTTGTCCAAGTAGCCCATCTAGAAAATGCCCTGGTTGGCAATATGTTA
TTACTGTGGCAACAGGAAGCTTCCATAGTGAGCAGTGACAGACAATGGTGTGCGGTACATGTGGGGAGA
GAATTCGCTGGCCAGTGTGCAGTAGCCAACCAGCAGTATGTGCCGGAACCAAATCCTGTGAGCATTGCT
GATTCTGAGGCCAGCCCTTTGTTAGCAGTCAGGATTTTACAGTTGGCGTGTGGCGAGGAGCACACTCTGG
CATTGTCAATAAGCAGAGAGATTTGGGCATGGGGTACCGGTTGTGAGTTGGGTCTCATTACCACTGCCTT
CCCAGTGACAAAGCCGAAAAGGTAGAACATCTTGCTGGGCGAGTGGTGTCTCAAGTTGCCTGTGGTGTCT
TTCCACAGCTTAGCCCTGTACAATGCCTCCCTCCCAGGATCTGAAGCCAGTCCCAGAACGATGCAACC
AGTGCAGCCAGCTCTTGATTACTATGACTGACAAAAGAAGACCATGTGATTATATCAGACAGTCATTGTTG
CCCATTAGGTGTGACACTGACAGAATCTCAGGCAGAAAACCATGCCAGCACTGCTCTCAGCCCCTCCACT
GAAACCCCTTGACAGGCAGGAAGAAGTATTTGAGAACACTCTTGAGCAAATGATCAGTCTGTTGCTACTG
AACTGAATGCAGTAAGTGTCTCAGATCACAAAGCAGCGATGCCATGTCCTCTCAACAAAATGTCATGGGAAC
AACTGAAATTTCTCTGCCAGAAACATACCATCATACCCTGACACCCAAGCAGTCAATGAATACCTACGG
AACTGTGAGATCATTAGTAAGAGAGGACTCAGAGCATGGTGAAAAGCCAGTGCCATCTCAGCCTCTTT
TAGAAGAAGCAATTCCTAATCTCCACAGCCCGCTACCACAAGCACCTCAGCCCTAACAGCCTGGTGGT
CTCTTGTGCATCTGCTGTTGGTGTGAGAGTGGCTGCTACTTATGAAGCTGGTGCCTTGTCACTGAAGAAA
GTTATGAACTTTTATAGTACAACCCCTTGTGAAACTGGAGCTCAGGCAGGCAGTAGTCCATTGGCCCCG
AAGTTTTGAAAGATAGCAGGGAAGAACAGGTTAAACAGGAATCAATGCAAGGAAAGAAAAGTTCAAGTCT
TGTGGATATCAGAGAAGAAGAAACAGAGGGAGGCAGTCAAGACTCTCCCTCCCTGGATTGTTGTCACAA



[View online »](#)

GTTCCCCCAGGCTCTTAAGAAAGGCTGCACGGGTGAAAACGAGGACAGTGGTCTGACCCACATACA
 GTGGAGAAGCAGATGCGCTCCTGCCTTCTCTGAGAACAGAAGTGTGGACCTGGGGAAAGGGAAGGAAGG
 GCAGCTGGGGCACGGCGATGTTCTGCCTAGGCTTCAACCGTTGTGTGAAAAATGTCTGGATGGCAAAGAA
 GTAATCCATCTGGAGGCAGGTGGTTACCATTCTCTTGCACCTACTGCGAAATCCCAGGTTTACTCATGGG
 GTAGCAATACCTTTGGTCAACTTGGGCATTCCGATTTTCCAACAACAGTTCCTCGTCTTGCAAAGATAAG
 CAGTAAAAATGGAGTCTGGAGCATAGCTGCAGGCAGGGATTATCCCTGTTTTAGTGGATACAGAAGAC
 TTCCAGCCTGGTTATATTACAGTGGCCGACAGGACCCTACAGAAGGTGACAACCTCCAGAGAATCACA
 GTGGTTCTAAGACTCCAGTACTTCTCCTGTAGTAAGCTTGGATATATAAGCAGAGTGACAGCAGGAAA
 AGATAGCTATTTAGCCTTGGTGGATAAAAAATTATGGGGTATATTGCCAGTCTCCACGAGTTAGCTACT
 ACAGAAAGACGATTCTATTCAAACCTAAGTGATATCAAATCTCAGATTCTCAGGCCTCTTCTCAGTTTGA
 AAAATTTGGGCACTACAACCTACAGTCCAGCTGTTGCAGGAGGTGGCTAGCCGATTCAGCAAGCTGTGTTA
 CCTCATTGGTCAGCATGGAGCCTCATTGAGCAGCTTCTTTCATGGGGTAAAGGAAGCCAGGAGTTTGGTC
 ATCCTGAAGCATTCAAGTCTTCTTGGATAGTTATACAGAGTATTGCACATCTATTACAAATTTCTGG
 TTATGGGAGGATCCAGCTTCTTGTAAAGCCTGCCATTGATTTCTAAATAAAAACCAAGAGCTGTTGCA
 AGATTTGTGAGAAGTGAATGACGAAAACACTCAGTTGATGAAAATACTGAATACTTTGTTTTTCTGCCA
 ATCAGACGACTTCATAATTACGCAAAAAGTTTTGCTAAAGCTTGCTACTTGTGTTTGAAGTGGCATCTCCAG
 AATATCAGAAAACCTGCAGGATTCCAGTCTTGTATGAGTGTCTTCTCCATCTCGGCAGGAAAAGGAA
 GGAAGCAGAAATACACACTGGGCTTCTGGAAGACCTTCCCCGAAAAATGACGGATTCTTGGAGGAAGCCA
 GAGCGTCGACTGCTGTGTGAGAGTAGTAACCGAGCCCTGTCTCTGCAGCATGCTGGGAGGTTTTCCGTGA
 ATGGTTCATTCTCTTAAATGATGCCCTGGTCCATGCCAGTCTCCACGCACCATGTTTTCCCTCTGGC
 CACGCTGTGGGCAGAGCCACTGTCTGAAGAAGCTGGTGGTGTGAATGGCTTAAAGATAACTACACCTGAG
 GAGCAGTTCACCTCATTTCATCTACACCCAGGAAAAGACAAAGTGGCTACGAGCTATAAGCCAAGCCC
 TAGACAGGCTTTGAGAGGGATGTCTGATCTCCCCCTTATGGAAGTGGTAGCAGTGTTCAGAGCAGGGA
 ACCACCCATTTACGCGAGTGCCAAATATACTTTCTACAAGGATCCCTCGCCTAAAGGATGCCACCTATGAT
 GGACGCTGGCTTTCAGGGAAGCCTCATGGCAGAGGGTTTTGAAGTGGCCTGATGAAAAGATGATTCTG
 GCATGTTGAGAAATGGCTTGGAAAGATGGGTATGGAGAATACAGAATCCCAAAACAAGGCAATGAACAAAGA
 AGACCATTATGTGGGCCATTGGAAGAAGGAAAAATGTGCGGTCAAGGAGTCTACAGCTATGCTTCTGGT
 GAAGTATTTGAGGGCTGTTTTCAAGATAATATGCGTCATGGTCATGGTCTTCTACGAAGTGGAAATTTGA
 CGTCTCTTCTCCTAGTATGTTTCTTGGCCAGTGGGTAATGGATAAGAAAGCAGGATATGGTGTCTTTGA
 TGATATCACTAGGGGGGAAAAGTATATGGGAATGTGGCAAGATGATGTGTGTCAAGGAAATGGTGTGGT
 GTTACCCAGTTTGGATTACTACGAGGGCAACTTTCACCTTAAATAAATGATGGGAAATGGGTTTTGC
 TTTCCGAAGATGATACTATCTATGAAGGAGAATTTTCAGATGACTGGACTCTTAGTGAAAAGGGAACACT
 GACTATGCCAAATGGAGACTACATTGAAGTATTTTTAGTGGAGAATGGGGATCTGGGATAAAAACTCACT
 GGAACCTACTTCAAACCTAGTCTATATGAGAGTGATAAAGACAGACCTAAAGTTTTTCAGGAAGCTAGGAA
 ACCTGGCAGTGCCAGCTGATGAGAAGTGGAAAGCGGTGTTTGACGAATGTTGGCGCAACTGGGCTGTGA
 GGGCCAGGCCAAGGGGAAGTTTGGAAAGCATGGGACAATATTGCTGTGGCCTTGACCACCAGTCGGCGC
 CAGCACAGAGACAGTCCAGAAAATCTGAGTCGTTACAGACTCAGACACTAGAGAGTTTGGAAATTCATTC
 CACAGCATGTTGGTGCCTTCTCTGTGGAGAAATATGATGACATCAGGAAATTTTAAATAAGGCCTGTGA
 CACTCCTCTGCACCCCTGGGCAGGCTTGTGGAGACACTGGTTGCAGTGTATAGAATGACATACGTGGGC
 GTAGGAGCCAACCGCAGGTTATTGCAGGAGGCTGTAAGGAGATTAAGTCTATCTTAAGCGAATTTTCC
 AGCTGGTGGGTTCTTATTTCTGAGCTGCCTGAAGAAGGCAGCACAATCCTCTCTGCTCCTCTGCC
 AACCGAAAGGAAGTCTTTTTGCACTGGGAAGTCAGATTCCCGATCTGAATCACCAGAGCCAGGTTATGTA
 GTAACGAGTCTGGATTATTGCTTCTGTGCTGTACCTCGGCTCTACCCACCGCTGTTTATGCTTTATG
 CTTTGGATAATGATCGCGAGGAAGACATTTACTGGGAATGTGCTTTCGACTAAATAAGCAGCCAGATAT
 TGCTCTCCTGGGCTTCTTGGGGTGCAGAGGAAATTTGGCCAGCAACCTTGTCAATCCTTGGAGAGAGT
 AAAAAGTTTTGCCAACACGAAAGATGCTTGTTTGCCTCAGCAGTGAATGTCTGCAGCAGATCAGCA
 CAACATTTACCCATCAGACAACTTAAGGTCATCCAGCAGACTTTTGGAGAGATCTCTCAGAGTGTCT
 GCGTCACTCCACGAAGACTTCTTGTGGTCCATGGATGACTTGTTCCTGTTTTCTATATGTGGTGCTA
 CGGGCCAGGATTAGGAATTTAGGCTCTGAGGTACACCTCATTGAGGATCTAATGGACCCCTATCTCAGC
 ATGGGGAACAGGGTATAATGTTACCACCTTGAAGGCATGTTACTACCAGATTACGCGTGAGAAGCTTAA
 C

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG215448 representing NM_020919
 Red=Cloning site Green=Tags(s)

MDSKKRSSTEAEGSKERGLVHIWQAGSFPITPERLPGWGGKTVLQAALGVKHGVLLEDGEVYVSGTLPW
 RSGPVEICPSSPILENALVGQYVITVATGSFHSAGVTDNGVAYMMGENSAGQCAVANQQYVPEPNPVVIA
 DSEASPLLAVRILQLACGEEHTLALSISREIWAAGTGCQLGLITTAFFVTKPQKVEHLAAGRVLVQVACGA
 FHSLALVQCLPSQDLKVPVPERCNCQSQLITMTDKEDHVIISDSHCCPLGVTLTESQAENHASTALSPST
 ETLDRQEEVFENTLVANDQSVATELNAVSAQITSSDAMSSQQNMGTTEISSARNIPSYPDQAVNEYLR
 KLSHDHVSREDSEHGKPVPSQPLLEEAIPNLHSPPTTSTSALNSLVVSCASAVGVRVAATYEAGALSLLK
 VMFYSTTPCETGAQAGSSAIGPEGLKDSREEQVKQESMQGKSSSLVDIREETE GGSRRLSLPGLLSQ
 VSPRLLRKAARVKTRTVLTPYSGEADALLPSLRTEVWTWGKGEQQLGHGDVLPRLQLPVCVKCLDGKE
 VIHLEAGGYHSLALAKSQVYVSWGNTFGQLGHSDFPTTVPRLAKISSENGVWSIAAGRDYSLFLVDTED
 FQPGLYYSGRQDPTGDNLPENHSGSKTPVLLSCKLGYISRVTAGKDSYLALVDKNIMGYIASLHELAT
 TERRFYSKLSDIKSQILRPLLLENLGTTTTQVLLQEVASRFSKLCYLIGQHAGASLSSFLHGVKEARSLV
 ILKHSSFLDSYTEYCTSI TNFLVMGGFQLLAKPAIDFLNKNQELLQDLSEVNDENTQLMEILNTLFFLP
 IRRLLHNYAKVLLKLATCFEASPEYQKLDSSCYECLALHLGRKRKEAETLGFWKTFPGKMTDSL RKP
 ERRLLCESSNRALSLQHAGRFVSNWFILFNDALVHAQFSTHHVFPLATLWAEPLSEEAGGVNGLKITTPE
 EQFTLISSTPQEKTKWLRASIQAVDQALRGMSDLPYVSGSSVQRQEPPI SRS AKYTFYKDPRLKDATYD
 GRWLSGKPHGRGVLKWPDGKMYSGMFRNGLEDGYGEYRIPNKAMNKEDHYVGHWKEGKMGCGQVYVYASG
 EVFEGCFQDNMRHGHGLLRSGKLTSSSPSMFIGQWVMDKKAGYGVFDDITRGEKYMGMWQDDVCQNGVV
 VTQFGLYYEGNFHLNKMNGVLLSEDDTIYEGEFSDDWTL SGKGTLTMPNGDYIEGYFSGEWGSGIKIT
 GTYFKPSLYESDKDRPKVFRKLGNLAVPADEKWKAVFDECWRQLGCEGPGQGEVWKAWDNIAVAALTSRR
 QHRDSPEILSRSTQTLESLEFIPQHVGAFSVEKYDDIRKYL IKACDTPHPLGRLVETLVAVYRMTYVVG
 VGANRRLLQEAVKEIKSYLKRIFQLVRFPELPEEGSTIPLSAPLPTERKSFCTGKSDSRSESEPEPGYV
 VTSSGLLLPVLLPRLYPPLFMLYALDNDREEDIYWECLRLNKQPDIALGLFLGVQRKFWPATLSILGES
 KKVLPTTKDACFASAVECLOQIISTFTPSDKLKIQQTFEEISQSVLASLHEDFLWSMDDLFPVFLYVVL
 RARIRNLGSEVHLIEDLMDPYLQHGEQGMFTTLKACYQIQREKLN

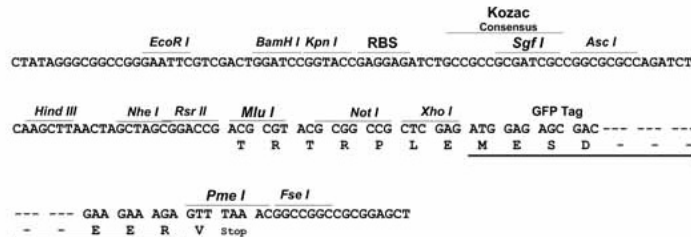
TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



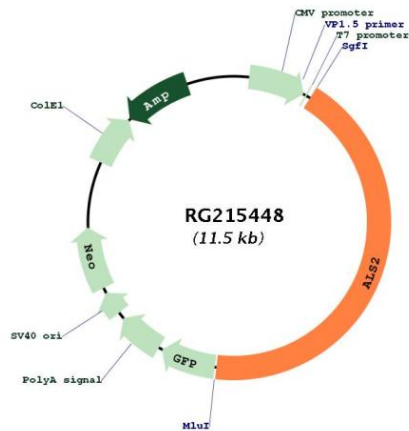
ACCN:

NM_020919

ORF Size:	4971 bp
OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p>
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_020919.4
RefSeq Size:	6470 bp
RefSeq ORF:	4974 bp
Locus ID:	57679
UniProt ID:	Q96Q42
Cytogenetics:	2q33.1
Domains:	RCC1, VPS9, MORN
Protein Families:	Druggable Genome
Protein Pathways:	Amyotrophic lateral sclerosis (ALS)

Gene Summary:

The protein encoded by this gene contains an ATS1/RCC1-like domain, a RhoGEF domain, and a vacuolar protein sorting 9 (VPS9) domain, all of which are guanine-nucleotide exchange factors that activate members of the Ras superfamily of GTPases. The protein functions as a guanine nucleotide exchange factor for the small GTPase RAB5. The protein localizes with RAB5 on early endosomal compartments, and functions as a modulator for endosomal dynamics. Mutations in this gene result in several forms of juvenile lateral sclerosis and infantile-onset ascending spastic paralysis. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Oct 2008]

Product images:

Circular map for RG215448