

Product datasheet for **RG200391**

DARS1 (NM_001349) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DARS1 (NM_001349) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	DARS1
Synonyms:	aspRS; DARS; HBSL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG200391 representing NM_001349
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGCCAGCGCCAGCGCCAGCCGAAGAGTCAGGAGAAGCCGCGGAGATCATGGACCGCGCGGAAGATT
 ATGCTAAAGAGAGATATGGAATATCTTCAATGATACAATCACAAGAAAAACCAGATCGAGTTTTGGTTCC
 GGTTAGAGACTTGACAATACAAAAGCTGATGAAGTTGTTTGGGTACGTGCAAGAGTTTCATAACAAGCAGA
 GCTAAAGGAAAACAGTGTCTTCTAGTCCTACGTACGACAGCAGTTTAAATGTCCAGGCTCTTGTGGCGGTGG
 GAGACCATGCAAGCAAGCAGATGGTTAAATTTGCTGCCAACATCAACAAAGAGAGCATTGTGGATGTAGA
 AGGTGTTGTGAGAAAAGTGAATCAGAAAATTGGAAGCTGTACACAGCAAGACGTTGAGTTACATGTTTACG
 AAGATTTATGTGATCAGTTTGGCTGAACCCGCTGCCCTGCAGCTGGATGATGCTGTTTCGGCCTGAGG
 CAGAAGGAGAAGGGAAGGAAGAGCTACTGTTAACAGGATACAAGATTAGACAACAGAGTCATTGATCT
 TAGGACATCAACTAGTCAGGCAGTCTTCGGTCTCCAGTCTGGCATCTGCCATCTCTCCGAGAACTTTA
 ATTAACAAAGTTTTGTGAAATCCAAACTCTAAAATTTTCAGCTGCCAGTGAAGGAGGAGCCAATG
 TTTTACTGTGTCATATTTAAAAATAATGCATACCTGGCTCAGTCCCCACAGCTATATAAGCAAATGTG
 CATTTGTGCTGATTTTGAGAAGTTTTCTCTATTGGACAGTATTCAGAGCGGAAGACTCTAATACCCAT
 AGACATCTAACTGAGTTTGTGGTTTGGACATTGAAATGGCTTTTAATTACCATTACCACGAAGTTATGG
 AAGAAATTGCTGACACCATGGTACAAATATTCAAAGGACTTCAAGAAAGTTTCAGACTGAAATTCAAAC
 AGTGAATAACAGTCCCATGTGAGCCATTCAAATTTTGGAGCCAACTAAGACTAGAATATTGTGAA
 GCATTGGCTATGCTTAGGGAAGCTGGAGTCGAAATGGGAGATGAAGACGATCTGAGCACACCAAAATGAAA
 AGCTGTTGGGTCATTTGGTAAAGGAAAAGTATGATACAGATTTTTATTTCTTGATAAATATCCATTGGC
 TGTAAAGACCTTTCTATACCATGCCTGACCAAGAATAATCCAAACAGTCCAACTCTTACGATATGTTTATG
 AGAGGAGAAGAAATATTGTCAGGAGCTCAAGAATACATGATCCTCAACTGCTAACAGAGAGAGCTTTAC
 ATCATGGAATTGATTTGGAGAAAATTAAGGCTTACATTGATTCTCCGCTTTGGAGCCCTCTCATGC
 TGGTGGAGGCATTGGATTGGAACGAGTTACTATGCTGTTTCTGGGATTGCATAATGTTCTGCAGACCTCC
 ATGTTCCCTCGTGATCCCAAACGACTCACTCT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG200391 representing NM_001349
 Red=Cloning site Green=Tags(s)

MPSASASRKSQEKPREIMDAAEDYAKERYGISSMIQSQEKPDRLVLRVRLDTIQKADEVVWRARVHTSR
 AKGKQCFLVLRQQQFNQALVAVGDHASKQMVKFAANINKESIVDVEGVVRKVNQKIGSCTQQDVELHVQ
 KIYVISLAEPRLPLQLDDAVRPEAEEGEEGRATVNQDTRLNDRVIDLRTSTSQAVFRLQSGICHLFRET
 LNKGFVEIQTPKII SAASEGGANVFTVSYFKNNAYLAQSPQLYKQMCICADFVKVFSIGPVFRAEDSNTH
 RHLTEFVGLDIEAFNYHYHEVMEEIADTMVQIFKGLQERFQTEIQTVNKQFPCEPFKFLPTLRLEYCE
 ALAMLREAGVEMGDEDDLSTPNEKLLGHLVKEKYDIDFYILDKYPLAVRPFYTMPDPRNPKQSNYSYDMFM
 RGEEILSGAQRHDPQLLTERALHHGIDLEKIKAYIDFRFGAPPHAGGGIGLERVTMLFLGLHNVRQTS
 MFPRDPKRLTP

TRTRPLE - GFP Tag - V

Restriction Sites:

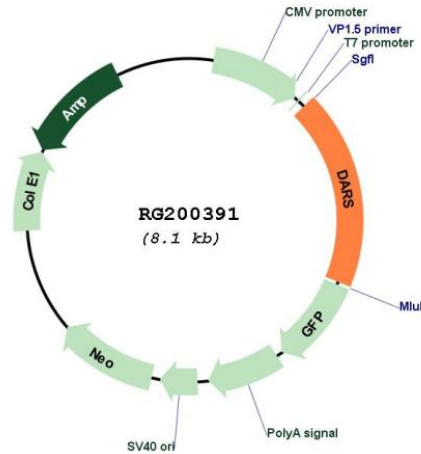
Sgfl-Mlul

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_001349

ORF Size: 1503 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_001349.4](#)

RefSeq Size: 2322 bp

RefSeq ORF: 1506 bp

Locus ID: 1615

UniProt ID: [P14868](#)

Cytogenetics: 2q21.3

Domains: tRNA-synt_2, tRNA_anti

Protein Pathways: Aminoacyl-tRNA biosynthesis

Gene Summary: This gene encodes a member of a multienzyme complex that functions in mediating the attachment of amino acids to their cognate tRNAs. The encoded protein ligates L-aspartate to tRNA(Asp). Mutations in this gene have been found in patients showing hypomyelination with brainstem and spinal cord involvement and leg spasticity. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jun 2014]