

Product datasheet for **MG221638**

Gls2 (NM_001033264) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Gls2 (NM_001033264) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Gls2
Synonyms:	A330074B06Rik; AI195532; GA; GLS; Lga
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG221638 representing NM_001033264
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCGCTCCATGAGGGCTCTGCAGAACGCGCTGAGCCGCGGGCAGCCACGGTCGCGGGGAGGCTGGG
 GTCATCCGAGCCGGGGCCCGCTTCTGGCAGGGCGTCCGGTACTACCTCGGTGAGGCCGCGGCAGGG
 CAGGGGGACGCCACAGCCACCAGCCGACACTCGGATCATGACGCCTCACACAGCGGATGCTGCCT
 CGACTTGGTGACCTGCTTTTCTACACTATTGCAGAGGGACAGGAGCGTATCCCTATCCACAAGTTACCA
 CGGCTCTGAAGGCCACTGGACTGCAGACGTGAGACCCACGGTCCAGGACTGCATGAGCAAGATGCAGCG
 CATGGTCCAAGAGTCCAGCAGCGGTGGCCTCTTGGATCGAGAGCTCTTCCAAAAGTGTGTGAGCAGCAAC
 ATTGTGCTCTGACTCAGGCATTCGAAAGAAGTTTGTATTCTGACTTTGAGGAGTTCACGGGCCATG
 TGGATCGCATATTTGAGGATGCCAAAGAGCCACTGGAGGCAAAGTGGCAGCCTACATCCCGCACCTGGC
 CAAATCAAACCCAGACCTTTGGGGCGTCTCCCTGTGACTGTGGATGGGAGCGGCACTCTGTGGCCAC
 ACGAAGATCCCCTTCTGCCTGCAGTCTGTGTCAAGCCCCTCACTTACGCCATCTCCGTGAGCACCTTAG
 GCACTGACTACGTGCACAAGTTTGTGGCAAGGAACCCAGTGGTCTGCGCTATAACAAAACCTCCCTCAA
 TGAGGAAGGAATCCCCATAACCCCATGGTCAATGCTGGTGCCATTGTGGTCAGCTCCCTGATCAAGATG
 GACTGTAACAAAGCAGAGAAGTTCGATTTTGTGTACAGTATCTGAACAAGATGGCTGGGAACGAATTCA
 TGGGGTTCAGCAATGCCACATCCAGTCAGAGAAGGAGACTGGGGATCGGAATTACGCCATCGGCTATTA
 CCTCAAGGAGAAGAAGTCTTCCCTAAGGGTGTGGACATGATGGCTGCCCTTGATCTCTATTTCCAGCTG
 TGCTCTGTGGAGGTTACCTGTGAGTCAGGCAGTGTGATGGCGGCCACTTGCCCAATGGCGGCATCTGCC
 CTATCACAGGGGAGAGCGTGTGAGCGCGAGGCCGTGCGCAACACCCTCAGCCTCATGGCATTCTGTGG
 CATGTATGACTTCTCGGGCCAGTTTGCCTTCCATGTGGGCTGCCAGCCAAGTCAGCTGTGTGAGGAGCC
 ATCCTCCTGTTGATACCAATGTCATGGGCATGATGTGTCTGTGCCACCCTTAGACAAGCTGGGGAACA
 GCCAAAGGGGCATCAACTTCTGCCAGAAGTTGGTGTCTCTTTAACTCCACAATGACAACCTGCG
 GCACTGCGCTCGGAAGTTAGACCCACGGAGGGAAGGAGAGGTTGGAACAAGACCGTGGTGAACCTG
 CTATTTGCTGCATATAGTGGAGATGTCTCGGCCCTTCAAGGTTTGCATTGTGCGCCATGGATGAGC
 AGAAGGACTATGATCCCGCACAGCCCTACATGTCGCTGCAGTGAAGGGCACATTGAAGTTGTCAAATT
 TCTGATCGAGGCTTGCAAAGTGAATCCTTTTGTCAAGGACAGTGGGGCAACATCCCTGGACGATGCT
 GTGCAGTTCAACCACCTGGAGGTGGTCAAACCTGCTTCAAGATTACCATGACTCCTACTTGTCTCTGAGT
 CTC AAGCTGAGGGCGCAGCTGAGACCCTGTCCAAGAGAATCTAGAGAGCATGGTA

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG221638 representing NM_001033264
 Red=Cloning site Green=Tags(s)

MRSMRALQNALSRAGSHGRRGGWGHPSRGPLLGRGVRYLLGAAAQGRGTPHSHQPQHSDDASHSGMLP
 RLGDLLFYTIAEGQERIPHFKFTALKATGLQTSDPRLQDCMSKMQRMVQESSGGLLDRELFQKCVSSN
 IVLLTQAFRKKFVIPDFEFTGHVDRIFEDAKEPTGGKVAAYIPHLAKSNPDLWGVSLCTVDGQRHVS
 GH TKIPFCLQSCVKPLTYAISVSTLGTDYVHKFVKGEPGLRYNKL SLNEEGIPHNPMVNAGAI VVSSLIKM
 DCNKA EKFDVFLQYLNKMAGNEFMGFSNATFQSEKETGDRNYAIGYYLKEKKCFPKGVDMMALDLYFQL
 CSVEVTCESGSVMAATLANGGICPITGESVLSAEAVRNTLSLMHSCGMYDFSGQFAFHVGLPAKSAVSGA
 ILLVVPNVMMCLSPPLDKLGN SQRGINF CQKLVSLFNFHNYDNL RHCARKLDP RREGGEVRNKTVVNL
 LFAAYSGDVSALRRFALSAMDMEQKDYDSRTALHVA AE GHIEVVKFLIEACKVNP FVKDRWGNIP LDDA
 VQFNHLEVVKLLQDYHDSYLLSESQA EAAAETLSKENLESMV

TRTRPLE – GFP Tag – V

Restriction Sites:

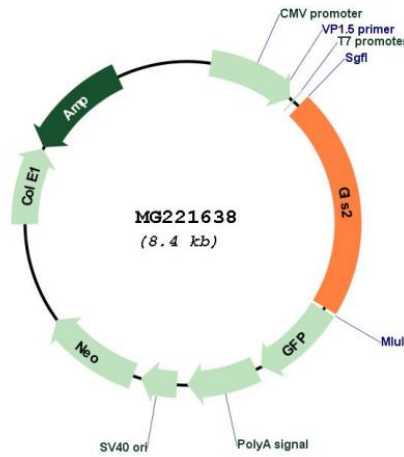
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_001033264

ORF Size: 1806 bp

OTI Disclaimer: 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.

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_001033264.3](#), [NP_001028436.2](#)

RefSeq Size: 2460 bp

RefSeq ORF: 1809 bp

Locus ID: 216456

UniProt ID: [Q571F8](#)

Cytogenetics: 10 D3

Gene Summary: Plays an important role in the regulation of glutamine catabolism. Promotes mitochondrial respiration and increases ATP generation in cells by catalyzing the synthesis of glutamate and alpha-ketoglutarate. Increases cellular anti-oxidant function via NADH and glutathione production. May play a role in preventing tumor proliferation.[UniProtKB/Swiss-Prot Function]