

Product datasheet for **MG224745**

Slc38a1 (NM_134086) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Slc38a1 (NM_134086) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Slc38a1
Synonyms:	AA408026; AA409865; AL022800; AU015942; NAT2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG224745 representing NM_134086
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGATGCATTTCAAAGTGGCCTCGAGCTAACGGAGCTGCAGAACATGACGGTGCCGAAGATGACAACG
 TCAGCAACGACTCTAATGACTTCACAGAAGTAGAAAACGCCAGATAAATAGCAAGTTCATCTCAGATCG
 GGAGAGTAGGAGGAGTCTCACAACAGCCATCTGGAGAAAAGGAAATGCGACGAGTATATCCAGGAACA
 ACCTCCCTGGGAATGTCTGTCTTTAACCTGAGCAACGCCATCATGGGCAGTGGAATCTTGGGCCTTGCTT
 TCGCCTTGGCCAACACCGGGATCCTCCTTTCTGATACTTCTGACTTCGGTGACACTGTGTCTATATA
 TTCAATAAACCTACTGCTGATCTGTTCCAAGGAAACCGGCTGCATGGTGTATGAGAAGCTGGGAGAGCAA
 GTCTTCGGCACCACGGGAAGCTGGTGTCTTCGGAGCCACCTCTCTGCAGAACTGGGGCGATGCTGA
 GCTACCTCTTATAGTAAAAACGAATTCCTCAGCCATAAAATCCCTCATGGGAGAGGAGGATGCATT
 TTCAGCCTGGTACGTCGATGGCCGAGTGTGGTGGTGTGGTACCTTTGGCATAATCCTCCGCTGTGT
 CTCTTGAAGAACCTGGGGTATCTTGGCTACACGAGTGGGTTTTCCCTAAGCTGCATGATGTTTTCCATA
 TAGTGGTCATCTACAAGAAATTCAGACTCCCTGCATGAGTGTGGAGCAGAACTCGACAGTCAGTGCTAA
 TGTGACCGACGCGTGCACACCAAAGTATGTCACCTTCAACTCAAAGACGGTGTATGCTTTACCAACCATC
 GCCTTCGCGTTTTGTCTGCCACCCGTCCTGCCAATCTACAGCGAGCTCAAAGACCGGTCACAGAAGA
 AAATGCAGATGGTTTCAAACATCTCTTCTTGTATGTTTGTCTGACTTCTGACGGCCATCTTTGG
 GTACTTGCAGTTTTATGAAAAGGTGCAGTCAGATCTCCTTCAAGTACCAGAGCACAGGCGACATTCTC
 ATCCTAACCGTGGCGTGGCCGTCATCGTGGCCGTCATCCTCACCGTGCCTGTGCTGTTTTTACAGTTC
 GATCATCGTTATTTGAGCTGGCCAAGAAGACAAAGTCCACCTGTGCCCCATGTCTTGGTGACCATCAT
 ACTCTTGATCATTATCAACCTGTTGGTGTCTTATCCCTCCATGAAGGATATCTTTGGAGTCGTAGGA
 GTCACGCTGCTAATATGCTCATTTCATTCTTCTTCTGCTCTTTATTTAAAAATCACGAACCAGGACG
 GAGATAAAGGCACTCAAAGAATTTGGGCGGCCCTTTCTTGGGCTTGGGGGTGTTGTTCTCCTTGATCAG
 CATCCCTCTGGTCATCTACGACTGGGCTTGTCTCTGCGACCGACGAAGGCCAC

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

Protein Sequence:

>MG224745 representing NM_134086
 Red=Cloning site Green=Tags(s)

MMHFKSGLLELTELQNMTPEDDNVSNDSNDFTEVENGQINSKFI SDRESRRSLTNSHLEKRKCDEYIPGT
 TSLGMSVFNLSNAIMGSGILGLAFALANTGILLFILLTSVTLLSIYSINLLL ICSKETGCMVYEKLGEG
 VFGTTGKLVIFGATSLQNTGAMLSYLFIVKNELPSAIKSLMGEEDAFSAWYVDGRVLVVMVTFGIILPLC
 LLKNLGYLGYTSGFSLSCMMFFLIVVIYKFKQTPCMSVEQNSTV SANVTDCTPKYVTFNSKTVYALPTI
 AFAFVCHPSVLP IYSELKDRSQKKMQMVSNISFFAMFVMYFLTAIFGYLTFYEKVQSDLLHKYQSTGDIL
 ILTVRLAVIVAVILTVPVLFVTRSSLFELAKKTKFHLCRHVLVTIILLIINLLVIFIPSMKDFGVV
 VTSANMLIFILPSSLYLKITNQDQDKGTQRIWAALFLGLGVLFSLISIPLVIYDWACSSGTDEGH

SGP**TRRRLE** - GFP Tag - V

Restriction Sites:

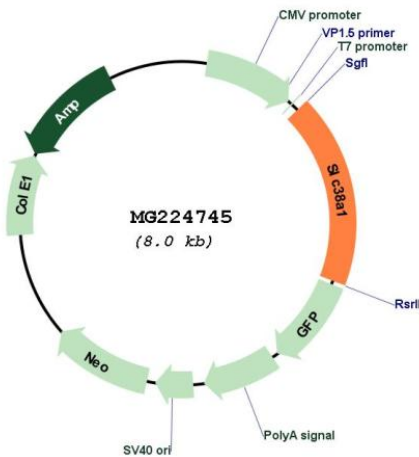
Sgfl-RsrII

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:



ACCN: NM_134086

ORF Size: 1455 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_134086.4](#), [NP_598847.2](#)

RefSeq Size: 7752 bp

RefSeq ORF: 1458 bp

Locus ID: 105727

UniProt ID: [Q8K2P7](#)

Cytogenetics: 15 F1

Gene Summary: Functions as a sodium-dependent amino acid transporter. Mediates the saturable, pH-sensitive and electrogenic cotransport of glutamine and sodium ions with a stoichiometry of 1:1. May also transport small zwitterionic and aliphatic amino acids with a lower affinity. May supply glutamatergic and GABAergic neurons with glutamine which is required for the synthesis of the neurotransmitters glutamate and GABA.[UniProtKB/Swiss-Prot Function]