

Product datasheet for **MG208367**

Slc1a1 (NM_009199) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Slc1a1 (NM_009199) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Slc1a1
Synonyms:	D130048G10Rik; EAAC1; EAAC2; EAAT3; MEAAC1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG208367 representing NM_009199
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGGAAGCCCACGAGCTCGGGATGTGACTGGCGCCGCTTCTACGGAATCACTGGCTGCTCTCCA
 CCGTGGCCGCGTGGTACTAGGAATTGCTTAGGAGTCGTGGTTCGAGGACACAGTGAGCTCTCAAATCT
 GGATAAATTCTACTTTGCTTTTCTGGGAAATCTGATGAGGATGCTGAAGCTGGTCATTTTGGCGCTG
 ATCGTATCCAGCATGATCACAGGTGTCGCTGCACTGGATTCCAATGTGTCTGGGAAGATTGGTCTGCGCG
 CTGTAGTATATTATTTCTCCACCACCGTATTGCTGTAATCCTAGGTATTGTGTTAGTTGTGAGTATCAA
 GCCTGGTGTCACTCAGAAAGTGAATGACATCAACAGGACGGTAAAACCCCTGAAGTCAGCACCATTGGAT
 GCCATGTTGGACCTGATCAGGAACATGTTCCCTGAGAATCTGGTCCAAGCCTGTTTTCAGCAGTACAAAA
 CCAAGCGGAAGAGGTGAAGCCTGTGGCGATCCTGGGGGAACGCAACGGAGGTGTCTGTACCACAGC
 CATGACAACAATGTCTGAGAACAAGACAAGGAATACAAGATCGTGGCCTGTACTCAGACGGCATCAAT
 GTCTGGGCTTGATTATCTTCTGCTCTGCTTTGGCCTTGTATTGGGAAAATGGGAGAAAAGGGGCGAGA
 TTCTGGTGGACTTCTCAATGCCTTGAGTGACGCCACCATGAAAACTGTCAGATCATCATGTGCTACAT
 GCCGATTGGCATTGTTCTTAATTGCTGGGAAGATCATAGAAGTTGAAGACTGGGAAAATATCCGCAAG
 CTGGGCCCTTACATGGCCACTGCTCTGAGCGGGCTTGCAATCCACTCCCTCATAGTTCTGCCCTGCTCT
 ATTTATAGTTGTGCGGAAGAACCCTTTCCGCTTTGCCTTGGGTATGGCGCAGGCTCTCCTGACAGCTCT
 CATGATCTCGTCCAGTTCCGCAACCCTGCCAGTTACATTCCGCTGTGCGGAAGAAAAGAACCAGGTAGAC
 AAGAGGATCACGAGATTTGTGCTGCCTGTTGGTGCCACCATCAACATGGACGGCACTGCGCTCTACGAAG
 CTGTGGCAGCCGTGTTTATTGCGCAACTGAATGGCTTGACCTAAGCATTGGGCAGATCGTCACCATTGAG
 CATTACAGCCACCGCTGCCAGCATTGGAGCTGCTGGGGTGCCTCCAGGCTGGCCTGGTACCATGGTGATC
 GTGCTGAGTGCTGTGGGCTGCCTGCCGAGGACGTCACCCTGATCATTGCTGTTGACTGGCTCCTGGACC
 GGTTACAGGACCATGGTGAACGTCCTGGGTGATGCGTTTGGGACGGGCATCGTAGAGAAGCTCTCGAAGAA
 GGAGCTGGAGCAGATGGATGTTTCGCTGAAGTCAACATCGTGAACCCCTTTGCCCTGGAACCCACAACC
 CTCGATAACGAAGACTCAGATACCAAGAAGTCTTATGTCAATGGGGCTTCGCGGTAGACAAATCTGACA
 CCATCTCGTTCCTCAGACCTCACAGTTC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG208367 representing NM_009199
 Red=Cloning site Green=Tags(s)

MGKPTSSGCDWRRFLRNHWLLSTVAAVVLGIVLGVVVRGHSLSNLDKIFYFAFPEILMRMLKLVILPL
 IVSSMITGVAALDSNVSGKIGLRAVVYFSTTVIAVILGIVLVSIKPGVTQKVNDRINRTGKTPEVSTMD
 AMLDLIRNMFENLVQACFQYKTKREEVKPVGDPGNATEVSVTTAMTTMSENKTHEYKIVGLYSDGIN
 VLGLIIFCLVFGLVIGMGEKGQILVDFFNALSDATMKIVQIIMCYMPIGILFLIAGKIIIEVEDWEIFRK
 LGLYMATVLSGLAIHSLIVLPLLYFIVVRKNPFRFALGMAQALLTALMISSSSATLPVTFRCAEEKNQVD
 KRITRFVLPVGATINMDGTALYEAAVFIQNLNGLDLSIGQIVTISITATAASIGAAAGVPQAGLVMTVI
 VLSAVGLPAEDVTLIIAVDWLLDRFRTMVNVLGDAFGTGIVEKLSKKELEQMDVSSEVNIIVNPFALPTT
 LDNEDSDTKKSYVNGGFVAVDKSDTISFTQTSQF

TRTRPLE – GFP Tag – V

Restriction Sites:

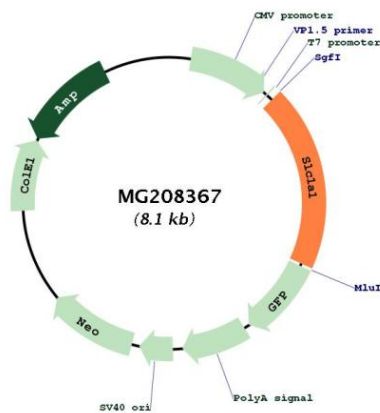
Sgfl-MluI

Cloning Scheme:


ACCN:	NM_009199
ORF Size:	1569 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_009199.2 , NP_033225.1
RefSeq Size:	3708 bp
RefSeq ORF:	1572 bp
Locus ID:	20510
UniProt ID:	P51906
Cytogenetics:	19 C1

Gene Summary:

Sodium-dependent, high-affinity amino acid transporter that mediates the uptake of L-glutamate and also L-aspartate and D-aspartate (PubMed:12119102, PubMed:18684713). Can also transport L-cysteine (PubMed:30840898). Functions as a symporter that transports one amino acid molecule together with two or three Na⁽⁺⁾ ions and one proton, in parallel with the counter-transport of one K⁽⁺⁾ ion. Mediates Cl⁽⁻⁾ flux that is not coupled to amino acid transport; this avoids the accumulation of negative charges due to aspartate and Na⁽⁺⁾ symport (By similarity). Plays an important role in L-glutamate and L-aspartate reabsorption in renal tubuli (PubMed:9233792). Plays a redundant role in the rapid removal of released glutamate from the synaptic cleft, which is essential for terminating the postsynaptic action of glutamate (PubMed:9233792). Contributes to glutathione biosynthesis and protection against oxidative stress via its role in L-glutamate and L-cysteine transport (PubMed:30840898). Negatively regulated by ARL6IP5 (PubMed:12119102).[UniProtKB/Swiss-Prot Function]

Product images:

Circular map for MG208367