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Product datasheet for MG208519

Slc7a8 (NM_016972) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Slc7a8 (NM_016972) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Slc7a8
Synonyms:	AA408822; LAT2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

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ORF Nucleotide Sequence:

>MG208519 representing NM_016972
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAAAAGGGAGCCCGCCAGCGAAACAACACCGCGAAGAACCACCCGGGTTCTGACACCAGCCCTGAGG
CCGAGGCTAGCTCGGGAGGGGGCGGAGTAGCCCTGAAGAAAGAGATCGGATTGGTCAGCGCCTGTGGTAT
CATTGTAGGGAACATCATTGGCTCCGGAATCTTTGTCTCACCGAAAGGTGTGCTGGAAAACGCGGGCTCT
GTGGGCCTTGCTCTCATTGTCTGGATCGTGACAGGCATCATCACAGCCGTGGGAGCTCTCTGCTATGCTG
AGCTAGGCGTCACCATCCCTAAGTCTGGAGGTGATTACTCTTATGTGAAGGACATCTTCGGAGGACTGGC
TGGGTTCCTGCGGCTGTGGATTGCTGTGCTGGTGATCTACCCCACCAACCAAGCTGTCATCGCCCTCACC
TTCTCCAACTACGTGCTGCAGCCGCTCTTCCCTACCTGCTTCCCCCCTGAGTCCGGTCTGCGACTCCTGG
CTGCCATCTGTTTGTTGCTCCTCACATGGGTCAACTGCTCCAGTGTCCGATGGGCCACCCGGGTTCAAGA
TATCTTCACAGCTGGGAAGCTCCTGGCCCTGGCTCTGATCATCATCATGGGTATTGTGCAGATATGCAAA
GGAGAATTCTTCTGGCTGGAGCCAAAGAATGCATTTGAGAATTTCCAAGAACCTGACATCGGCCTCGTTG
CTCTGGCATTCCTCCAGGGCTCCTTTGCCTATGGTGGCTGGAACTTCCTTAATTATGTGACTGAGGAACT
TGTGGATCCTTACAAGAACCTTCCTAGAGCCATCTTCATCTCCATCCCACTGGTCACATTTGTGTACGTC
TTTGCTAATATTGCATACGTCACTGCAATGTCCCCCCAGGAGCTGCTAGCCTCCAATGCAGTTGCTGTGA
CTTTTGGAGAGAAACTCCTCGGGGTCATGGCCTGGATCATGCCCATTTCTGTTGCCCTGTCCACGTTTGG
TGGAGTCAATGGCTCCCTCTTCACCTCCTCCCGGCTGTTCTTTGCTGGAGCCAGAGAAGGCCACCTTCCC
AGTGTGTTGGCCATGATCCACGTGAAGCGCTGCACTCCAATCCCAGCCCTGCTCTTCACATGCCTCTCCA
CCCTGCTGATGCTGGTCACCAGTGACATGTACACACTCATCAACTATGTGGGCTTCATCAACTACCTCTT
CTATGGGGTAACGGTTGCAGGACAGATAGTCCTTCGCTGGAAGAAGCCTGACATTCCCCGCCCCATCAAG
GTCAGCCTGCTGTTTCCCATTATCTACCTGCTGTTCTGGGCCTTCCTGCTGATCTTCAGCCTGTGGTCAG
AGCCAGTGGTGTGTGGCATTGGCCTGGCCATTATGCTGACAGGAGTTCCTGTCTACTTCCTGGGTGTCTA
CTGGCAACACAAACCCAAGTGTTTCAATGACTTCATTAAGTCCCTAACCCTAGTGAGTCAGAAGATGTGT
GTGGTCGTGTATCCCCAGGAGGGGAACTCGGGGGCTGAGGAAACAACTGATGACTTAGAGGAGCAACACA
AGCCCATCTTCAAGCCTACTCCTGTCAAGGACCCGGATTCGGAGGAGCAGCCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG208519 representing NM_016972
Red=Cloning site Green=Tags(s)

MEKGARQRNNTAKNHPGSDTSPEAEASSGGGGVALKKEIGLVSACGIIVGNIIGSGIFVSPKGVLENAGS
VGLALIVWIVTGIITAVGALCYAELGVTIPKSGGDYSYVKDIFGGLAGFLRLWIAVLVIYPTNQAVIALT
FSNYVLQPLFPTCFPPESGLRLLAAICLLLLTWVNCSSVRWATRVQDIFTAGKLLALALIIIMGIVQICK
GEFFWLEPKNAFENFQEPDIGLVALAFLQGSFAYGGWNFLNYVTEELVDPYKNLPRAIFISIPLVTFVYV
FANIAYVTAMSPQELLASNAVAVTFGEKLLGVMAWIMPISVALSTFGGVNGSLFTSSRLFFAGAREGHLP
SVLAMIHVKRCTPIPALLFTCLSTLLMLVTSDMYTLINYVGFINYLFYGVTVAGQIVLRWKKPDIPRPIK
VSLLFPIIYLLFWAFLLIFSLWSEPVVCGIGLAIMLTGVPVYFLGVYWQHKPKCFNDFIKSLTLVSQKMC
VVVYPQEGNSGAEETTDDLEEQHKPIFKPTPVKDPDSEEQP

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

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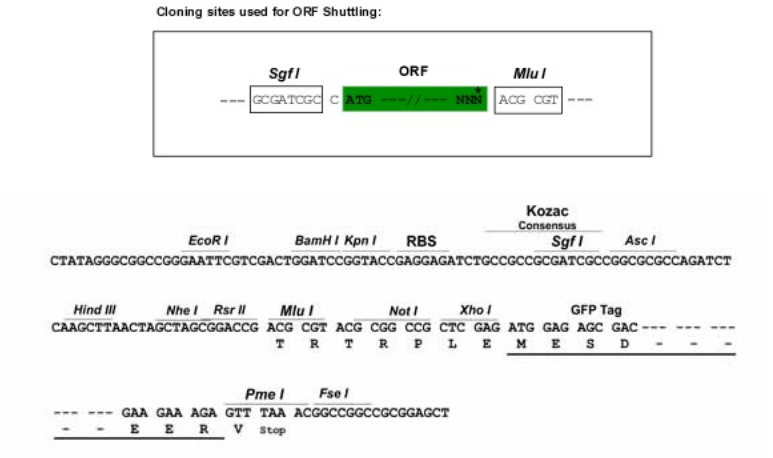
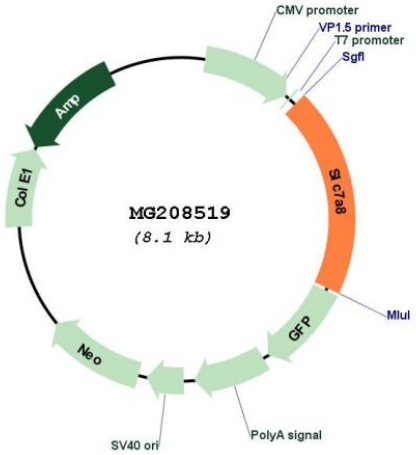
Cloning Scheme:



Plasmid Map:



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ACCN:	NM_016972
ORF Size:	1593 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_016972.2, NP_058668.1
RefSeq Size:	4064 bp
RefSeq ORF:	1596 bp
Locus ID:	50934
UniProt ID:	Q9QXW9
Cytogenetics:	14 C2
Gene Summary:	Sodium-independent, high-affinity transport of small and large neutral amino acids such as alanine, serine, threonine, cysteine, phenylalanine, tyrosine, leucine, arginine and tryptophan, when associated with SLC3A2/4F2hc. Acts as an amino acid exchanger. Has higher affinity for L-phenylalanine than LAT1 but lower affinity for glutamine and serine. L-alanine is transported at physiological concentrations. Plays a role in basolateral (re)absorption of neutral amino acids. Involved in the uptake of methylmercury (MeHg) when administered as the L-cysteine or D,L-homocysteine complexes, and hence plays a role in metal ion homeostasis and toxicity. Involved in the cellular activity of small molecular weight nitrosothiols, via the stereoselective transport of L-nitrosocysteine (L-CNSO) across the transmembrane. Plays an essential role in the reabsorption of neutral amino acids from the epithelial cells to the bloodstream in the kidney.[UniProtKB/Swiss-Prot Function]

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