

## Product datasheet for **MG208809**

### Slc22a1 (NM\_009202) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Slc22a1 (NM_009202) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Slc22a1
Synonyms:	Lx1; Oct1; Orct; Orct1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG208809 representing NM\_009202  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCCACCGTGGACGATGTCCTGGAGCACGTTGGAGAGTTTGGCTGGTTCAGAAGCAAGCCTTCTCTGT  
 TGCTATGCCTGATCTCAGCTTCTTTAGCTCCCATCTACGTGGGCATCGTTTTCTGGGCTTCACCCCGA  
 CCACCACTGCCGGAGTCTGGAGTGGCCGAGCTGAGCCAGCGGTGTGGCTGGAGCCCGCAGAGGAGCTG  
 AACTACACCGTGCCGGGCTGGGGTCTGCGGGTGGAGCCCTCCTTCTCAGCCAATGCATGAAGTATGAGG  
 TGGACTGGAACCAAGAGCACCCCTTACTGTGTGGACCCACTGTCCAGCCTGGCTGCCAACAGGAGCCACTT  
 GCCACTGAGCCCCCTGCGAGCATGGCTGGGTGTACGACACTCCCGCTCCTCCATCGTCACTGAGTTAAAC  
 CTGGTGTGTGGAGACGCCTGAAAGTGGACCTTTTTCAGTCTGTGTGAAGTGGGCTTCTTCTGGGCT  
 CCCTGGTGTGGGTTACATTGCAGACAGGTTTGGCCGTAAGCTCTGCCTCCTGGTACCCTCTGGTCCAC  
 CTCCTGTCTGGCGTGTAAACAGCGGTGGCCCCAGACTATACATCCATGTTGCTTTTCGCCTTCTGCAA  
 GGCATGGTCAGCAAAGGCAGCTGGGTGTCTGGCTACACCTTGATCACAGAGTTTGTGGGCTCTGGCTACA  
 GGAGAACGACAGCCATCTTGTACCAGGTGGCCTTACAGTGGGGCTAGTGGGGCTTGTGGGGTGGCCTA  
 TGCCATTCAGACTGGCCTGGCTCCAGCTGGCGGTGTCCCTGCCACCTTCTCTTCTGCTGTATTAC  
 TGGTTTGTCCCAGAAATCCCCCGGTGGCTGTTGTCTCAGAAGAGAACCACTCAAGCGGTAAGGATAATGG  
 AGCAAATTGCACAGAAGAAGCAGGAAGGTGCCCCCTGCTGACCTGAAGATGATGTGCCTTGAGGAAGATGC  
 CTCAGAGAGGCGGAGTCTTTCGTTTGCAGACCTGTTCCGCACCCCAAGCTGAGGAAGCACACCCCTCATC  
 CTGATGTATCTATGGTCTCTTGTGCTGTGTACCAGGGCCTCATCATGCATGTGGGAGCCACAGGGG  
 CCAACCTACCTGGACTTCTTTTATTCTCTCTAGTGGAAATCCCTGCGGCCTTTATCATCTCTTGTCA  
 CATTGACCGCATTGGCCGCATCTACCCAATAGCGGCATCAAATCTGGTGGCGGGGCGAGCCTGCCTCCTC  
 ATGATCTTTATCCACATGAGCTGCATTGGTTGAATGTGACCCTCGCTTGTCTTGGCCGTATGGGAGCCA  
 CCATTGTGTTGCAGATGGTCTGCCTAGTGAACGCTGAGCTGTACCCTACATTCATCAGGAATCTCGGGAT  
 GATGGTGTGCTCTGCCCTGTGTGACCTAGGTGGGATCTTACCCCTTTCATGGTGTTCAGGCTGATGGAA  
 GTTTGGCAAGCCCTGCCCTCATTTTGTGGGGTTTGGGCCTGAGTGTGGGGCTGTGACCCTTCTAC  
 TTCCGGAGACCAAGGGCGTGGCTCTGCCTGAGACTATTGAAGAAGCGGAGAACCTGGGAAGGAGAAATC  
 AAAGGCCAAAAGAAAACACGATTTACCTCAGGTCAAACAGGCAAATCCCCACATACC

**ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA**

**Protein Sequence:**

>MG208809 representing NM\_009202  
 Red=Cloning site Green=Tags(s)

MPTVDDVLEHVGEFQWFQKQAFLLCLISASLAPIYVGVFLGFTPDHHCSPGVAELSQRCGWSPAEEEL  
 NYTVPLGSGAGEASFLSQCMKYEVDWNQSTLDCVDPLSSLAANRSHLPLSPCEHGWWYDTPGSSIVTEFN  
 LVCGDAWKVDFQSCVNLGFFLGSLLVGYIADRFGRKLCLLVTTLVTSLSGVLTAVAPDYTSMLLFRLLQ  
 GMVSKGSWVSGYTLITEFVSGYRRTTAILYQVAFTVGLVGLAGVAYAIIPDWRWLQAVSLPTFLFLYY  
 WFPVSPRWLLSQKRTTQAVRIMEQIAQKNRKVPADLKMMCLEEDASERRSPSFADLFRTPSLRKHTLI  
 LMYLWFSCAVLYQGLIMHVGTGANLYLDFYSSLVEFPAAFIILVTIDRIGRIYPIAASNLVAGAACLL  
 MIFIPHELHNLVTLACLGRMGATIVLQMVCLVNAELYPTFIRNLGMMVCSALCDLGGIFTPFMVFRLME  
 VWQALPLILFGVLGLSAGAVTLLL PETKGVLPETIEEAENLGRRKSKAKENTIIYLQVQTGKSPHT

**TRTRPLE - GFP Tag - V**

**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



ACCN: NM\_009202

ORF Size: 1668 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\\_009202.5](#)

RefSeq Size: 2031 bp

RefSeq ORF: 1671 bp

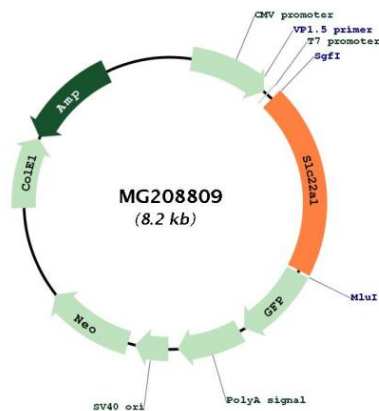
Locus ID: 20517

UniProt ID: [O08966](#)

Cytogenetics: 17 8.63 cM

**Gene Summary:** Translocates a broad array of organic cations with various structures and molecular weights including the model compounds 1-methyl-4-phenylpyridinium (MPP), tetraethylammonium (TEA), N-1-methylnicotinamide (NMN), 4-(4-(dimethylamino)styryl)-N-methylpyridinium (ASP), the endogenous compounds choline, guanidine, histamine, epinephrine, adrenaline, noradrenaline and dopamine, and the drugs quinine, and metformin. The transport of organic cations is inhibited by a broad array of compounds like tetramethylammonium (TMA), cocaine, lidocaine, NMDA receptor antagonists, atropine, prazosin, cimetidine, TEA and NMN, guanidine, cimetidine, choline, procainamide, quinine, tetrabutylammonium, and tetrapentylammonium. Translocates organic cations in an electrogenic and pH-independent manner. Translocates organic cations across the plasma membrane in both directions. Transports the polyamines spermine and spermidine. Transports pramipexole across the basolateral membrane of the proximal tubular epithelial cells. The choline transport is activated by MMTS. Regulated by various intracellular signaling pathways including inhibition by protein kinase A activation, and endogenously activation by the calmodulin complex, the calmodulin-dependent kinase II and LCK tyrosine kinase.[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MG208809