

Product datasheet for **MR208519**

Slc7a8 (NM_016972) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Slc7a8 (NM_016972) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Slc7a8
Synonyms:	AA408822; LAT2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR208519 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAAAAAGGGAGCCCGCCAGCGAAACAACACCCGGAAGAACCACCCGGTTCTGACACCAGCCCTGAGG
 CCGAGGCTAGCTCGGGAGGGGGCGGAGTAGCCCTGAAGAAAGAGATCGGATTGGTCAGCGCCTGTGGTAT
 CATTGTAGGGAACATCATTGGCTCCGGAATCTTTGTCTCACCGAAAGGTGTGCTGAAAAACGCGGCTCT
 GTGGGCCCTTGCTCATTGTCTGGATCGTGACAGGCATCATCACAGCCGTGGGAGCTCTCTGCTATGCTG
 AGCTAGGCGTCACCATCCCTAAGCTGGAGGTGATTACTCTTATGTGAAGGACATCTTCGGAGGACTGGC
 TGGGTTCTCGCGCTGTGGATTGCTGTGCTGGTATCTACCCACCAACCAAGCTGTATCGCCCTCACC
 TTCTCAAACACTACGTGCTGCAGCCGCTCTCCCTACCTGCTTCCCCCTGAGTCCGGTCTGCGACTCCTGG
 CTGCCATCTGTTTGTCTCCTCACATGGGTCAACTGCTCCAGTGTCCGATGGGCCACCCGGTTCAAGA
 TATCTTACAGCTGGGAAGCTCCTGGCCCTGGCTGATCATCATCATGGGTATTGTGCAGATATGCAAA
 GGAGAATTCCTTGGCTGGAGCCAAAGAATGCATTTGAGAATTTCCAAGAACCTGACATCGGCCTCGTTG
 CTCTGGCATTCTCCAGGGCTCCTTTGCCATGTTGGCTGGAACCTCCTTAATTATGTGACTGAGGAACT
 TGTGGATCCTTACAAGAACCTTCTAGAGCCATCTTCACTCCATCCCCTGGTACATTTGTGTACGTC
 TTTGCTAATATTGCATACGTCACTGCAATGTCCCCCAGGAGCTGCTAGCCTCCAATGCAGTTGCTGTGA
 CTTTTGGAGAGAACTCCTCGGGGTCATGGCCTGGATCATGCCATTTCTGTTGCCCTGTCCACGTTTGG
 TGGAGTCAATGGCTCCCTCTTCACTCCTCCGGCTGTTCTTTGCTGGAGCCAGAGAAGGCCACCTTCCC
 AGTGTGTTGGCCATGATCCAGTGAAGCGCTGCACTCCAATCCCAGCCCTGCTCTTACATGCCTCTCCA
 CCCTGTGATGCTGGTCACCAAGTACACTGTACACTCATCAACTATGTGGGCTTCACTACCTCTTCT
 CTATGGGGTAACGGTTGCAGGACAGATAGTCTTCGCTGGAAAGAAGCCTGACATTCCTCCCGCCCATCAAG
 GTCAGCCTGCTGTTTCCATTATCTACCTGCTGTTCTGGGCCCTTCTGCTGATCTTCAGCCTGTGGTCAG
 AGCCAGTGGTGTGGCATTGGCCTGGCCATTATGCTGACAGGAGTTCCTGTCTACTTCTGGGTGCTCA
 CTGGCAACACAAACCAAGTGTTCATGACTTCAATAGTCCCTAACCTAGTGAGTCAGAAGATGTGT
 GTGGTCTGTATCCCCAGGAGGGAACTCGGGGCTGAGGAAACAACATGACTTAGAGGAGCAACACA
 AGCCCATCTTCAAGCCTACTCTGTCAAGGACCCGGATTCCGGAGGAGCAGCCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR208519 protein sequence
 Red=Cloning site Green=Tags(s)

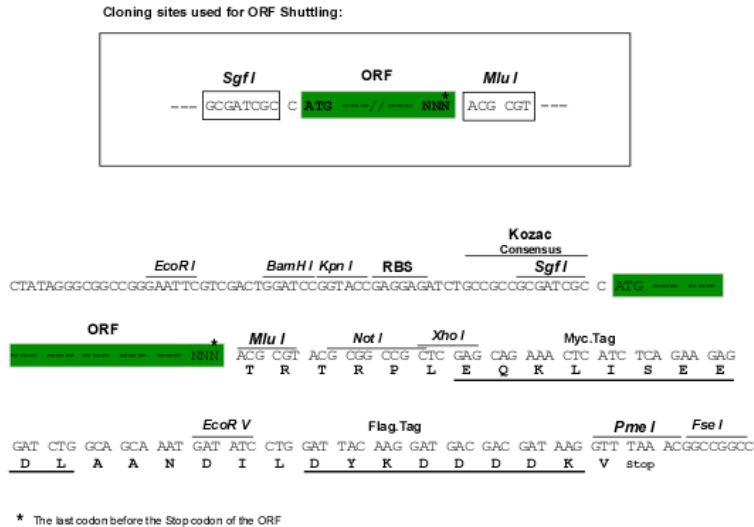
MEKGARQRNNTAKNHPGSDTSPEAEASSGGGVALKKEIGLVSACGIIVGNIIGSGIFVSPKGVLENAGS
 VGLALIVIVTGIITAVGALCYAELGVTIPKSGDYSYVKDIFGGLAGFLRLWIAVLVIYPTNQAVIALT
 FSNYVLQPLFPTCFPPESGLRLLAAICLLLLTWVNCSSVRWATRVDIFTAGKLLALALIIIMGIVQICK
 GEFFWLEPKNAFENFQEPDIGLVALAFLQGSFAYGGWNFLNYVTEELVDPYKNLPRAIFISIPLVTFVYV
 FANIAVYVAMSPQELLASNAVAVTFGEKLLGVMAWIMPISVALSTFGVNGSLFTSSRLFFAGAREGHL
 SVLAMIHVKRCTPIPALFTCLSTLLMLVTSDFMYTLINYYVGFINLYFYGVTVAGQIVLRWKKPDIPRPIK
 VSLLPFIIYLLFWAFLLIFSLWSEPVVCGIGLAIMLTGVPVYFLGVYQWHPKCFNDFIKSLTLVSQKMC
 VVVYPQEGNSGAEETDDLEEQHKPIFKPTPVKDPDSEEQP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_016972

ORF Size: 1596 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

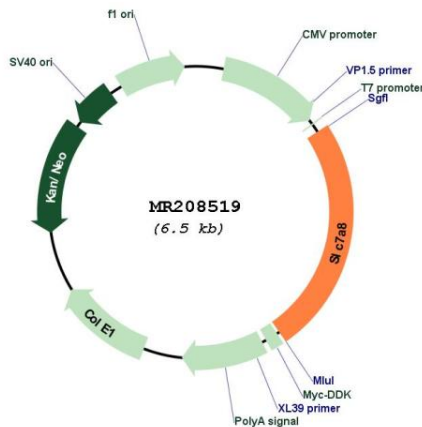
Locus ID: 50934

UniProt ID: [Q9QXW9](#)

Cytogenetics: 14 C2
MW: 57.9 kDa
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]

Product images:



Circular map for MR208519