

Product datasheet for **MR208231**

Slc7a5 (NM_011404) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Slc7a5 (NM_011404) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Slc7a5
Synonyms:	4F2LC; D0H16S474E; LAT1; TA1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>MR208231 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGGTGCGGGCGCCAAGAGGCGCGGTTGCGACCCGGCGGGCGGGCGGGAGGAGAGCGGC
 AGGCGCGGGAGAAGATGTTGGAGGCGCGCGGGGACGGCGCGGACCCGAGGGCGAAGGCGTGACCCCT
 GCAGCGCAATATCACGCTGCTCAACGGTGTGGCCATCATCGTGGGACCATCATCGGCTCTGGCATCTTC
 GTGACGCCACCGGCGTCTCAAGGAAGCGGGTGCAGGACTGTCGCTCGTGGTGTGGCTGTGTGCG
 GCGTCTTCTCCATCGTGGGCGCACTCTGCTACGCGGAGCTGGGACCAACCATCTCCAAGTCGGGCGGCGA
 CTACGCCATACATGCTGGAGGTCTACGGCTCGTTGCCCGCCTTCTCAAGCTCTGGATCGAGCTGCTCATC
 ATTCGGCCCTCTCGCAGTACATCGTGGCGCTGGTCTTCGCCACCTACTTGTCAAGCCGGTCTTCCCCA
 CTTGTCCGGTGCCCGAGGAAGCTGCCAAGCTCGTGGCCTGCCTCTGCGTGTCTCTCACAGCTGTGAA
 CTGCTACAGCGTGAAGGCTGCGACCCGTGTGCAGGACGCCTTTGCGGCTGCCAAGCTGTGGCCCTGGCC
 CTCATCATTTTGTCTGGCTTCATCCAGATGGGGAAGGACATGGGACAAGGTGATCGCTCCAACTGCAGC
 AGAAGTTGTCCTTTGAAGGCACCAATCTGGACGTGGGGAACATTGTGTTGGCTTTGTACAGCGGCCCTCTT
 CGCCTACGGAGGATGGAATATCTGAATTTTGTACGGAGGAGATGATCAACCCCTACAGGAACCTGCC
 CTGGCCATCATCATCTCCTTGCCATTGTCACTGGTCTATGTGCTGACGAACCTGGCCTATTTCACTA
 CCCTCTCTACCAACCAGATGCTGACATCTGAAGCTGTGGCTGTGGACTTCGGGAACCTACCACTGGGTGT
 CATGCTCGGATCATTCTGTCTTTGTGGGCTGTCTTGGCTTCGGCTCTGTCAATGGGTCTCTGTTCAGC
 TCCTCAAGACTGTTCTTCGTGGGATCCAGGGAGGCCACCTGCCTTCTGTCTCTCCATGATCCACCCAC
 AGCTGTGACACCTGTGCCATCACTGGTGTTCAGTGTATAATGACGCTGATGTACGCTCTCCAGAGA
 TATCTTCTCCATCACTTCTTCAGCTTCTTCAACTGGCTGTGTGGCCCTGGCCATCATCGGTATG
 ATGTGGCTCCGATTCAAGAAGCCTGAGCTGGAGCGTCCCATCAAGGTGAATCTGGCCCTCCCGGTGTTCT
 TTATCCTGGCCTGCCTCTTCTCATTGCCGTGTCATTCTGGAAGACCCATGGAGTGTGGCATTGGCTT
 CGCCATCATCCTCAGCGGGCTGCCTGTCTACTTCTTTGGTGTCTGGTGGGAACAAGCCCAAGTGGATT
 CTGCAGGCTATCTTCTGTGACGGTGTCTGCCAGAAGTTGATGCAGGTGGTACCTCAGGAGACT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR208231 protein sequence
 Red=Cloning site Green=Tags(s)

MAVAGAKRRAVATPAAAAEEERQAREKMLEARRGDGADPEGEGVTLQRNITLLNGVAIIIVGTIIGSGIF
 VTPTGVLKEAGSPGLSLVWAVCGVFSIVGALCYAELGTTISKSGDYAYMLEVYGLPAFLKLIWIELLI
 IRPSSQYIVALVFATYLLKPVFPTCPVPEEAAKLVAQLCVLLLTAVNCYSVKAATRVQDAFAAAKLLALA
 LIILLGFIQMGKDMQGDNLQKLSFEGTNLDVGNIVLALYSGLFAYGGWNYLNFVTEEMINPYRNLP
 LAIIISLPIVTLVYVLTNLAYFTTLSTNQMLTSEAVAVDFGNYHLGVMSWIIPVFVGLSCFSGVNSLFT
 SSRLFFVGSREGHLPSVLSMIHPQLLTPVPSLVFTCIMTLMYAFSRDIFSIIINFFSFFNWLVALAIIGM
 MWLRFKKPELERPIKVNLAIPVFFILACLFLIAVSFWKTPMECGIGFAIILSGLPVYFFGVWKNKPKWI
 LQAIFSVTVLCQKLMQVVPQET

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:



ACCN: NM_011404

ORF Size: 1539 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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).

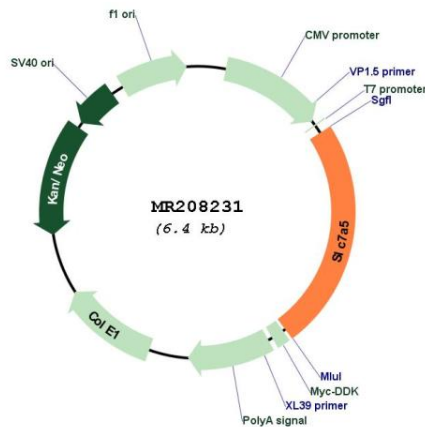
- Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid 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_011404.2](#), [NP_035534.2](#)

RefSeq Size: 3513 bp
 RefSeq ORF: 1539 bp
 Locus ID: 20539
 UniProt ID: [Q9Z127](#)
 Cytogenetics: 8
 MW: 55.9 kDa

Gene Summary: The heterodimer with SLC3A2 functions as sodium-independent, high-affinity transporter that mediates uptake of large neutral amino acids such as phenylalanine, tyrosine, L-DOPA, leucine, histidine, methionine and tryptophan (PubMed:9915839, PubMed:11011012). Functions as an amino acid exchanger (By similarity). May play a role in the transport of L-DOPA across the blood-brain barrier (Probable). May act as the major transporter of tyrosine in fibroblasts (By similarity). May mediate blood-to-retina L-leucine transport across the inner blood-retinal barrier (By similarity). Can mediate the transport of thyroid hormones triiodothyronine (T3) and thyroxine (T4) across the cell membrane. When associated with LAPTM4B, the heterodimer formed by SLC3A2 and SLC7A5 is recruited to lysosomes to promote leucine uptake into these organelles, and thereby mediates mTORC1 activation. Involved in the uptake of toxic methylmercury (MeHg) when administered as the L-cysteine or D,L-homocysteine complexes. Involved in the cellular activity of small molecular weight nitrosothiols, via the stereoselective transport of L-nitrosocysteine (L-CNSO) across the membrane (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR208231