

## Product datasheet for **MC217270**

### **Slc7a5 (NM\_011404) Mouse Untagged Clone**

#### **Product data:**

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



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**Fully Sequenced ORF:** >MC217270 representing NM\_011404  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCGGTGCGGGCGCCAAGAGGCGCGGTTGCGACCCGCGCGGGCGGGCGGGAGGAGAGCGGC  
 AGGCGCGGGAGAAGATGTTGGAGGCGCGGCGGGACGCGCGGACCCGAGGGCGAAGCGGTGACCCCT  
 GCAGCGCAATATCACGCTGCTCAACGGTGTGGCCATCATCGTGGGACCATCATCGGCTCTGGCATCTTC  
 GTGACGCCACCGCGTCTCAAGGAAGCGGGTGCAGCGGACTGTCGCTCGTGGTGTGGCTGTGTGCG  
 GCGTCTTCTCCATCGTGGGCGCACTCTGCTACGCGGAGCTGGGCACCACCATCTCCAAGTCGGGCGGCGA  
 CTACGCCATACATGCTGGAGGTCTACGGCTCGTTGCCCGCTTCTCAAGCTCTGGATCGAGCTGCTCATC  
 ATTCGGCCCTCTCGCAGTACATCGTGGCGCTGGTCTTCGCCACCTACTTGTCAAGCCGGTCTTCCCA  
 CTTGTCCGGTCCCGAGGAAGCTGCCAAGCTCGTGGCCTGCCTCTGCGTGTCTCTCACAGCTGTGAA  
 CTGCTACAGCGTGAAGGCTGCGACCCGTGTGCAGGACGCCTTTGCGGCTGCCAAGCTGTGGCCCTGGCC  
 CTATCATTTTTGCTCGGCTTCATCCAGATGGGGAAGGACATGGGACAAGGTGATCGCTCCAACTGCAGC  
 AGAAGTTGTCCTTTGAAGGCACCAATCTGGACGTGGGGAACATTGTGTTGGCTTTGTACAGCGGCCCTCTT  
 CGCCTACGGAGGATGGAATATCTGAATTTGTACGGAGGAGATGATCAACCCCTACAGGAACCTGCC  
 CTGGCCATCATCATCTCCTTGCCATTGTACACTGGTCTATGTGCTGACGAACCTGGCCTATTTCACTA  
 CCCTCTCTACCAACCAGATGCTGACATCTGAAGCTGTGGCTGTGGACTTCGGGAACCTACCACTTGGGTGT  
 CATGTCCTGGATCATTCTGTCTTTGTGGGCTTGTCTTGCTTCGGCTCTGTCAATGGGTCTCTGTTACG  
 TCCTCAAGACTGTTCTTCGTGGGATCCAGGGAGGCCACCTGCCTCTGTCTCTCCATGATCCACCCAC  
 AGCTGCTGACACCTGTGCCATCACTGGTGTTCAGTGTATAATGACGCTGATGTACGCCTTCCAGAGA  
 TATCTTCTCCATCATCAACTTCTCAGCTTCTTCAACTGGCTGTGTGGCCCTGGCCATCATCGGTATG  
 ATGTGGCTCCGATTCAAGAAGCCTGAGCTGGAGCGTCCCATCAAGGTGAATCTGGCCCTCCCGGTGTTCT  
 TTATCCTGGCCTGCCTCTTCTCATTGCGGTGTCATTCTGGAAGACCCATGGAGTGTGGCATTGGCTT  
 CGCCATCATCCTCAGCGGGCTGCCTGTCTACTTCTTTGGTGTCTGGTGGGAACAAGCCCAAGTGGATT  
 CTGCAGGTATCTTCTCTGTGACGGTGTCTGCCAGAAGTTGATGCAGGTGGTACCTCAGGAGACT**TAG**

**ACGGCT**ACGGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja2534\\_h02.zip](https://cdn.origene.com/chromatograms/ja2534_h02.zip)

**Restriction Sites:** SgfI-MluI

**ACCN:** NM\_011404

**Insert 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](mailto: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](#)

**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:** [BC026131](#), [AAH26131](#)

**RefSeq Size:** 3513 bp

**RefSeq ORF:** 1539 bp

**Locus ID:** 20539

**UniProt ID:** [Q9Z127](#)

**Cytogenetics:** 8

**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 LAPT4B, 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]