

## Product datasheet for **RC224688**

### SLC7A6 (NM\_003983) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SLC7A6 (NM_003983) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SLC7A6
Synonyms:	LAT-2; LAT3; y+LAT-2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC224688 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGAAGCCAGGGAGCCTGGGAGGCCACACCCACCTACCATCTTGTCCCTAACACCAGCCAGTCCCAGG  
 TGGAGAAGATGTCAGCTCGCCACCTCAAAGTCTCCGAAACTATGCAGCTGAAGAAGGAGATCCCT  
 GCTGAATGGGGTCAAGCTGGTGGTGGGCAACATGATCGGCTCAGGGATCTTTGTCTCACCAAGGGTGTG  
 CTGGTACACACTGCCTCTATGGGATGTCACTGATTGTGTGGGCCATTGGTGGGCTCTTCTCTGTTGTGG  
 GTGCCCTTTGTTATGCAGAGCTGGGACCACCATACCAAGTCGGGAGCCAGCTACGCTTATATTCTAGA  
 GGCCTTTGGGGCTTCATTGCCTTCATCCGCTGTGGGTCTCACTGCTAGTTGTTGAGCCACCAGGTCAG  
 GCCATCATCGCCATCACCTTTGCCAACTACATCATCCAGCCGCTTCCCCAGCTGTGATCCCCATAACC  
 TGGCTGCCGTCTCCTGGCTGCTGCTTGCATATGTCTGCTGACATTTGTGAAGTGTCCATGTCAAGTG  
 GGGCACACGTGTGCAGGACACGTTCACTTACGCCAAGGTCGTAGCGCTCATTGCCATCATTGTGATGGGC  
 CTTGTTAAACTGTGCCAGGGACACTCTGAGCACTTTCAGGACGCCTTTGAGGGTTCTCCTGGGACATGG  
 GAAACCTCTCTTGGCCCTACTCTGCCTCTTCTTACTCAGGTTGGGACACCCCTTAATTTTGTAAAC  
 AGAAGAAATCAAAAACCCAGAAAGAAATTTGCCCTTGGCCATTGGGATTTCTATGCCAATTGTGACGCTC  
 ATCTACATCCTGACCAATGTGGCCTATTACACAGTGTGAACATTTAGATGTCTTAGCAGTGTGCTG  
 TGGCTGTGACATTTGCTGACCAGACGTTGGCATGTTAGCTGGACCATCCCCATTGCTGTTGCCCTGTC  
 CTGCTTTGGGGCCTCAATGCATCCATCTTGTTCATCAAGGTTGTTCTTCGTGGGCTCCCGGGAGGGC  
 CACCTACCGGACCTTCTGTCCATGATCCACATGAGCGTTTTACACCTATCCCTGCTTACTGTTCAATT  
 GCACCATGGCACTCATCTACCTCATCGTGGAGGATGTTTTCCAGCTTATCAACTACTTCAGCTTCAGCTA  
 CTGGTTCTTCGTGGCCTGTCTGTTGTTGGACAGCTCTACCTCCGCTGGAAGGAGCCCAAGCGGCCCGG  
 CCTCTCAAGCTGAGCGTGTTTTTCCCATCGTGTCTGCATATGCTCCGTGTTTCTGGTGATAGTCCCC  
 TCTTCACTGACACCATTAATCCCTCATTGGCATCGGGATTGCCCTTCTGGAGTCCCTTCTACTTTCAT  
 GGGTGTACCTGCCAGAGTCCCGGAGGCCATTGTTTATCGGAATGCTCCTGGCTGCTATCACCAGAGGC  
 ACCCAGCAGCTTTGCTTTGTGCTGCTGACTGAGCTTGTAGCCGAAGAAAAAAGGATGAGAGGAAAA  
 CTGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC224688 protein sequence  
 Red=Cloning site Green=Tags(s)

MEAREPGRPTPTYHLVPNTSQSQVEEDVSSPPQRSSETMQLKKEISLLNGVSLVGNMIGSGIFVSPKGV  
 LVHTASYGMSLIVWAIGLFSVVGALCYAELGTTITKSGASYAYILEAFGGFIAFIRLWVSLVVEPTGQ  
 AIIAITFANYIIQPSFPPYLAACRLLAAACICLLTFVNCAAYVKGWTRVQDTFTYAKVVALIAIIVMG  
 LVKLCQGHSEHFQDAFEGSSWDMGNLSLALYSALFSYSGWDTLNFVTEEIKNPERNLPLAIGISMPIVTL  
 IYILTNAVYYTVLNI SDVLSSDAVAVTFADQTFGMFSWTIPIAVALSCFGLNASIFASSRLLFFVGSREG  
 HLPDLLSMIHIERFTPIPALFNCTMALIYLIVEDVFQLINYF SFSYWFVGLSVVGLYLRWKEPKRPR  
 PLKLSVFFPIVFCICSVFLVIVPLFTDTINSLIGIGIALSGVPFVFMGVYLPESRRPLFIRNVLAAITRG  
 TQQLCFCVLTLDVAEEKKDERKTD

**TR**TRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6331\\_c12.zip](https://cdn.origene.com/chromatograms/mk6331_c12.zip)

**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



ACCN: NM\_003983

ORF Size: 1545 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\\_003983.6](#)

RefSeq Size: 6281 bp

RefSeq ORF: 1548 bp

Locus ID: 9057

UniProt ID: [Q92536](#)

Cytogenetics: 16q22.1

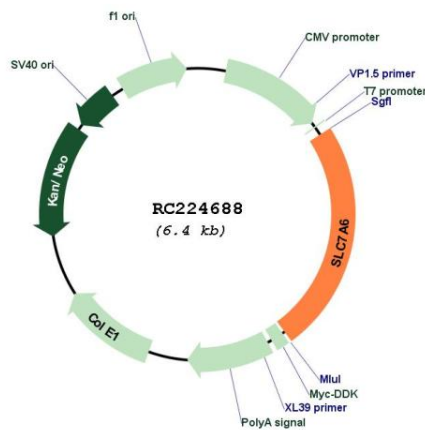
**Domains:** aa\_permeases

**Protein Families:** Druggable Genome, Transmembrane

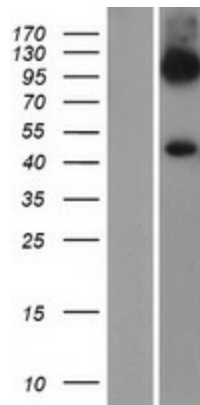
**MW:** 56.8 kDa

**Gene Summary:** Involved in the sodium-independent uptake of dibasic amino acids and sodium-dependent uptake of some neutral amino acids. Requires coexpression with SLC3A2/4F2hc to mediate the uptake of arginine, leucine and glutamine. Also acts as an arginine/glutamine exchanger, following an antiport mechanism for amino acid transport, influencing arginine release in exchange for extracellular amino acids. Plays a role in nitric oxide synthesis in human umbilical vein endothelial cells (HUVECs) via transport of L-arginine. Involved in the transport of L-arginine in monocytes. Reduces uptake of ornithine in retinal pigment epithelial (RPE) cells.[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for RC224688



Western blot validation of overexpression lysate (Cat# [LY418309]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC224688 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).