

## Product datasheet for **RC238594**

### SLC38A1 (NM\_001278390) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SLC38A1 (NM_001278390) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SLC38A1
Synonyms:	ATA1; NAT2; SAT1; SNAT1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>RC238594 representing NM\_001278390  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGATGCATTTCAAAGTGGACTCGAATTAAGTGGTTCGAAAACATGACAGTGCCCGAGGATGATAACA  
 TTAGCAATGACTCCAATGATTTACCGAAGTAGAAAATGGTCAGATAAATAGCAAGTTTATTCTGATCG  
 TGAAGTAGAAGAAGTCTCACAACAGCCATTTGGAAAAAAGAAGTGTGATGAGTATATCCAGGTACA  
 ACCTCCTTAGGCATGTCTGTTTTAACCTAAGCAACGCCATTATGGGCAGTGGGATTTGGGACTCGCCT  
 TTGCCCTGGCAAACACTGGAATCCTACTTTTTCTGGTACTTTTGACTTCAGTGACATTGTGTCTATATA  
 TTCAATAAACCTCCTATTGATCTGTTCAAAGAAAACAGGCTGCATGGTGTATGAAAAGCTGGGGAAACA  
 GTCTTTGGCACCACAGGAAGTTCGTAATCTTTGGAGCCACCTCTACAGAACTGGAGCAATGCTGA  
 GCTACCTCTTCATCGTAAAAATGAACTACCTCTGCCATAAAGTTTCTAATGGGAAAGGAAGACATT  
 TTCAGCCTGGTACGTGGATGGCCGCTTCTGGTGGTATAGTTACCTTTGGCATAAATCTCCCTCTGTGT  
 CTCTTGAAGAAGTTAGGGTATCTTGGCTATACTAGTGGATTTCCCTTGAGCTGTATGGTTTTTTCCATA  
 TTGTGGTTATTTACAAGAAATTTCAAATCCCTGCATTGTTCCAGAGCTAAATCAACAATAAGTGCTAA  
 TTCAACAAATGCTGACACGTGTACGCCAAAATATGTTACCTTCAATTCAAAGACCGTGTATGCTTTACCC  
 ACCATTGCATTTGCATTTGTTGGCCACCGTCAGTCCGCAATTTACAGTGAGCTTAAAGACCGATCAC  
 AGAAAAAATGCAGATGGTTTCAAACATCTCCTTTTTCGCCATGTTTGTATGTACTTCTTGACTGCCAT  
 TTTTGGCTACTTGACATTCTATGACAACGTGCAGTCCGACCTCCTCACAATAATCAGAGTAAAGATGAC  
 ATTCTCATCCTGACAGTGGCTGGCTGTCATTGTTGCTGTGATCCTCACAGTCCCGGTGTTATTTTTCA  
 CGGTTCGTTTCATCTTTATTTGAAGTGGTAAGAAAACAAAGTTTAAATTTATGTCGTCATACCGTGGTTAC  
 CTGCATACTCTTGGTTGTTATCAACTGTTGGTATCTTCATACCTCCATGAAGGATATTTTTGGAGTC  
 GTAGGAGTTACATCTGCTAACATGCTTATTTTCTTCTCCTTCTCTTTATTTAAAAATCACAGACC  
 AGGATGGAGATAAAGGAAGTCAAAGAAATTTGGCTCTTCTCTTCTCCAGTTTCCAGTCCAGCCCTGTTG  
 GCTCTCAGAAATGCATCATCTTCTCCCTGCAGCGCTCTCACTGAACATGCTCAAGCGCAAGGAAGTATA  
 ATCTTGTGTTCTCTGGATTCTGGATTTAGTAATCTGTAT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC238594 representing NM\_001278390  
 Red=Cloning site Green=Tags(s)

MMHFKSGLLELTELQNMTPEDDNI SNDSNDFTEVENQINSKFI SDRESRRSLTNSHLEKKKCDEYIPGT  
 TSLGMSVFNLSNAIMGSGILGLAFALANTGILLFLVLLTSVTLLSIYSINLLICSKETGCMVYEKLG  
 VFGTTGKVFIFGATSLQNTGAMLSYLFIVKNELPSAIKFLMGKEETFSAWYVDGRVLVVIIVTFGIILPLC  
 LLKNLGYLGYTSGFSLSCMVFFLIVVIYKFKQIPCIPELNSTISANSTNADTCTPKYVTFNSKT  
 VYALPTIAFAFVCHPSVLPPIYSELKDRSQKMQMVSNI SFFAMFVYFLTAIFGYLTFYDYNVQSDLLH  
 KYQSKDDILILTVRLAVIVAVILTVPVLFVTVRSSLFELAKTKFNLCRHTVVTCILLVVINLLVIFIP  
 SMKDFGVGVTSANMLIFILPSSLYLKITDQDGKGTQRIWLFLLQFPVQPCWLS  
 SECIIILPAALSLNMLKRKELIILCSLDSGFSNLY

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

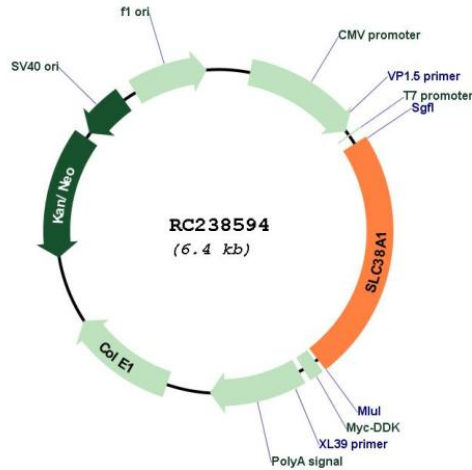
Cloning Scheme:

Cloning sites used for ORF Shutting:



\* The last codon before the Stop codon of the ORF

Plasmid Map:



**ACCN:** NM\_001278390

**ORF Size:** 1509 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).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u>NM_001278390.1, NP_001265319.1</u>
<b>RefSeq Size:</b>	2885 bp
<b>RefSeq ORF:</b>	1512 bp
<b>Locus ID:</b>	81539
<b>Cytogenetics:</b>	12q13.11
<b>Protein Families:</b>	Transmembrane
<b>MW:</b>	56.6 kDa
<b>Gene Summary:</b>	Amino acid transporters play essential roles in the uptake of nutrients, production of energy, chemical metabolism, detoxification, and neurotransmitter cycling. SLC38A1 is an important transporter of glutamine, an intermediate in the detoxification of ammonia and the production of urea. Glutamine serves as a precursor for the synaptic transmitter, glutamate (Gu et al., 2001 [PubMed 11325958]).[supplied by OMIM, Mar 2008]