

## Product datasheet for **SC324148**

### SLC38A1 (NM\_001077484) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SLC38A1 (NM_001077484) Human Untagged Clone
Tag:	Tag Free
Symbol:	SLC38A1
Synonyms:	ATA1; NAT2; SAT1; SNAT1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

>OriGene sequence for NM\_001077484.1  
 GGCCTGTCCGCGTTAAACCATCACAAAGCCATGGTTGCGGAAGGGCCACGCGTCCCCCAGT  
 AGGAGAATGACTCCGATTCGTGACCCTCAGCGCCGGTGCATGTCGATATATTTATTGAGT  
 GTCTACTGTGTGCCAGGCACTATATCTATGTGCATAGAAAAACCCTGGAAGGCCATACAA  
 CAATATATATAGAGTGATCGTCTCTGCTTGCTGAGCTAACAGGGGTGTCAAGCTTCCATT  
 TTGGTATCTACTTCTAAATACACTCAGAACAGGAGAAATTTGGACTAATTTTCAAACACT  
 AGACACTTTTCTAATCATGATGCATTTCAAAGTGGACTCGAATTAACCTGAGTTGCCAAAC  
 ATGACAGTGCCCCGAGGATGATAACATTAGCAATGACTCCAATGATTTTACCAGAAGTAGAA  
 AATGGTCAGATAAATAGCAAGTTTATTTCTGATCGTAAAAGTAGAAGAAGTCTCACAAAC  
 AGCCATTTGGAAGAAAGAGTGTGATGAGTATATCCAGGTACAACCTCCTTAGGCATG  
 TCTGTTTTAACCTAAGCAACGCCATTATGGCAGTGGGATTTTGGGACTCGCCTTTGCC  
 CTGGCAAACACTGGAATCCTACTTTTTCTGGTACTTTTGACTTCAGTGACATTGCTGTCT  
 ATATATTCATAAACCTCCTATTGATCTGTTCAAAGAAACAGGCTGCATGGTGTATGAA  
 AAGCTGGGGGAACAAGTCTTTGGCACCACAGGGAAGTTCGTAATCTTTGGAGCCACCTCT  
 CTACAGAACACTGGAGCAATGCTGAGCTACCTCTTCATCGTAAAAATGAACTACCTCT  
 GCCATAAAGTTTCTAATGGGAAAGGAGACATTTTACGCTGGTACGTGGATGGCCGC  
 GTTCTGGTGGTGATAGTTACCTTTGGCATAATTCTCCCTCTGTGTCTCTTGAAGAAGTTA  
 GGGTATCTTGGCTATACTAGTGGATTTTCTTGAGCTGTATGGTTTTTCTAATTGTG  
 GTTATTTACAAGAAATTTCAAATTCCTGCATTGTTCCAGAGCTAAATTCACAAATAAGT  
 GCTAATTCACAAATGCTGACACGTGTACGCCAAAATATGTTACCTTCAATTCAAAGACC  
 GTGTATGCTTTACCCACCATTCATTTGCATTTGTTTGGCACCCGTCAGTCTGCCAATT  
 TACAGTAGCTTAAAGACCGATCACAGAAAAAATGCAGATGGTTTCAAACATCTCCTTT  
 TTCGCCATGTTTGTATGTACTTCTTGACTGCCATTTTGGCTACTTGACATTCTATGAC  
 AACGTGACAGTCCGACCTCCTTCAAAATATCAGAGTAAAGATGACATTCTCATCCTGACA  
 GTGCGGCTGGCTGTCATTGTGCTGTGATCCTCACAGTGCCGGTGTATTTTTACCGTT  
 CGTTTCTTTTATTTGAACTGGCTAAGAAAACAAAGTTTAAATTTATGTCGTACATCCGTT  
 GTTACCTGCATACTCTTGGTTGTATCAACTTGTGGTGTATTCATACCCTCCATGAAG  
 GATATTTTTGGAGTCGTAGGAGTTACATCTGCTAACATGCTTATTTTCTTCTCCTTCA  
 TCTCTTTATTTAAAAATCACAGACCAGGATGGAGATAAAGGAAGTCAAAGAAATTTGGCT  
 GCCCTTTTCTGGGCTGGGGTGTGTTCTCCTTGGTCAAGTTCCTTGGTCACTAT  
 GACTGGGCTGCTCATCGAGTAGTGACGAAGGCCACTGAAACCCGCCGAGAAAAAGAAC  
 ATCCCTGTGTGCTCAGTCAAGTCCCCACACATCAGCAATCTCTCACCACTTCTTTT  
 CAAGTTTACAGAAGCAAACAGAAATGTACAGGATACTTAAATGGAATAACTTTTTGGTT  
 GCAAAACAGAGACATGGTTCTATAATGCTTCATGTCCCTCCAAGATTTGAGATCAATTTA  
 GGGATTGTGAATTTTTTTTTTCAAATTTCATACAATCATATTTCCAGTACTTTTACAA  
 TCATTTTTTACCCATCTAACTCTATGTTTTGGGCTTCCCGGTCTCTTAGAAGTTTGAA  
 ACATGATATACAATAATGTTTATTTATATACATCCAGATTCTGAAATAATTTTCTTACT  
 GATGTTTACGCTCACACTATCTGTACCTTTTGAAGAGAAAAGAACTTGAATTGTATAT  
 ATTTATTTTGTCTTACAGAAAAAATGGTTTCGTAATAATTTGCCTATTTTGGTTAACA  
 TAGCACATGGAGATAATCATCTGAAAGTTATAGGCACTGCCACTGCTGAATCAGAGCAT  
 GCCCAATATTTGAGGTGGCTCTGATTTCTGGCAGCTGAACTCGGAGTCCAGTGGCCT  
 AGCTGGTACCACATCTATTTCCATCCAGAGACATTCTCTGGCAAGTGTCTCAGCTGAAA  
 AGTGGTTGGGGATGATTCTTACCTTGGTAATTAATGAAGCTACACATTTGGTAATCTA  
 GCAAAATGAAGTATTTTTTCCCTCTTGGCAACTGTGTGAGAGTACTCTGGTCTGAGTCA  
 ACTTTCGCTGGGAAAACCTATGGAACCTACTGCAAAAAGATTGCAAAAATGCCTAAGA  
 AAATACTCTCTGATGCATTTAGCCTTCAACCCTACCTGTCTTGTGAAGGGAGAAAAAT  
 GTTTTAGTACATTATAGGCCAGCAGCTTTTATTCATGTCCACCAGCTAGTTGCACAGAG  
 AATCATGTGTACCTAACTAAGGATGATCTAGGATAAGTAACTCCTGTTTTATATTGAGTA  
 TTTTAGGGAAGTCTTTAAAGACTTGTATATCTATAAATCTAGGTTATTACAATAC  
 AAGAAATTTGTACCTTAAATAAGCCTCATTTCTATTTCTTCTTCAATTAATCTCCATCTA  
 GTCTTGTGAAAAAAAAAAAAAAAAA

<b>Restriction Sites:</b>	ECoRI-NOT
<b>ACCN:</b>	NM_001077484
<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
<b>Components:</b>	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><a href="#">NM_001077484.1</a></u> , <u><a href="#">NP_001070952.1</a></u>
<b>RefSeq Size:</b>	8148 bp
<b>RefSeq ORF:</b>	1464 bp
<b>Locus ID:</b>	81539
<b>UniProt ID:</b>	<u><a href="#">Q9H2H9</a></u>
<b>Cytogenetics:</b>	12q13.11
<b>Protein Families:</b>	Transmembrane

**Gene Summary:**

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]

Transcript Variant: This variant (2) differs in the 5' UTR, compared to variant 3. Variants 1, 2, 3, 4 and 5 encode the same isoform 1.