

## Product datasheet for **SC107507**

### LAT2 (SLC7A8) (NM\_182728) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	LAT2 (SLC7A8) (NM_182728) Human Untagged Clone
Tag:	Tag Free
Symbol:	LAT2
Synonyms:	LAT2; LPI-PC1
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC107507 sequence for NM_182728 edited (data generated by NextGen Sequencing)

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ATGGGGATTGTACAGATATGCAAAGGAGAGTACTTCTGGTGGAGCCAAAGAATGCATT
GAGAATTTCCAGGAACCTGACATCGGCCTCGTTCGCACTGGCTTTCTTCAGGGCTCCTTT
GCCTATGGAGGCTGGAACCTTCTGAATTACGTGACTGAGGAGCTTGTGATCCCTACAAG
AACCTTCCAGAGCCATCTTCATCTCCATCCCCTGGTACATTTGTGTATGTCTTTGCC
AATGTCGCTTATGTCACGTGCAATGTCCCCCAGGAGCTGCTGGCATCCAACGCCGTCGCT
GTGACTTTTGGAGAGAAGCTCCTAGGAGTCATGGCCTGGATCATGCCATTTCTGTTGCC
CTGTCCACATTTGGAGGAGTTAATGGGTCTCTCTCACCTCCTCTCGGCTGTTCTTCGCT
GGAGCCCAGAGGGCCACCTTCCAGTGTGTTGGCCATGATCCACGTGAAGCGCTGCACC
CCAATCCCAGCCCTGCTTTCACATGCATCTCCACCCTGCTGATGCTGGTCACCAGCGAC
ATGTACACACTCATCACTACGTGGGCTTCATCACTACCTCTTCTATGGGGTCACGGTT
GCTGGACAGATAGTCCTTCGCTGGAAGAAGCCTGATATCCCCCGCCCATCAAGATCAAC
CTGCTGTTCCCCATCATCTACTTGTGTTCTGGGCCTTCTGCTGGTCTTCAGCCTGTGG
TCAGAGCCGGTGGTGTGTGGCATTGGCCTGGCCATCATGCTGACAGGAGTGCCTGTCTAT
TTCCTGGGTGTTTACTGGCAACACAAGCCCAAGTGTTCAGTGACTTCATTGAGCTGCTA
ACCCTGGTGAGCCAGAAGATGTGTGTGGTCGTGTACCCCGAGGTGGAGCGGGGCTCAGGG
ACAGAGGAGGCTAATGAGGACATGGAGGAGCAGCAGCAGCCCATGTACCAACCCACTCCC
ACGAAGGACAAGGACGTGGCGGGCAGCCCCAGCCCTGA

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Clone variation with respect to NM\_182728.1  
561 t=>c



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<b>5' Read Nucleotide Sequence:</b>	>OriGene 5' read for NM_182728 unedited TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGATTGCTCCTCACA TGGGTCAACTGTTCCAGTGTGCGGTGGGCCACCCGGTTCAAGACATCTTCACAGCTGGG AAGCTCCTGGCCTTGGCCCTGATTATCATCATGGGGATTGTACAGATATGCAAAGGAGAG TACTTCTGGCTGGAGCCAAAGAATGCATTTGAGAATTTCCAGGAACCTGACATCGGCCTC GTCGCACTGGCTTTCCTTCAGGGCTCCTTTGCCTATGGAGGCTGGAACCTTCTGAATTAC GTGACTGAGGAGCTTGTGATCCCTACAAGAACCTTCCCAGAGCCATCTTCATCTCCATC CCACTGGTCACATTTGTGTATGTCTTTGCCAATGTCGCTTATGCTACTGCAATGTCCCCC CAGGAGCTGCTGGCATCCAACGCGCTCGCTGTGACTTTTGGAGAGAAGCTCCTAGGAGTC ATGGCCTGGATCATGCCATTTCTGTTGCCCTGTCCACATTTGGAGGAGTTAATGGGTCT CTCTTCACCTCCTCTCGGCTGTTCTTCGCTGGAGCCCAGAGGGCCACCTTCCCAGTGTG TTGGCCATGATCCACGTGAAGCGCTGCACCCCAATCCCAGCCCTGCTCTTCACATGCATC TCCACCCTGCTGATGCTGGTCACCAGCGACATGTACACTCATCAACTACGTGGGCTTC ATCAACTACCTTCTATGGGGTACGGTTGCTGGACAGAAGTCTTCGCTGGAAGAACC TGATATCCCCGCCCATCAGATCACCTGCTNGTCCCATCACTACTTGCTGTCTGGGCCTT CTGCTGTCTTCACCTGGGTCAAACCCGTTGTGTGCATT
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_182728
<b>Insert Size:</b>	3000 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<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>	<a href="#">NM_182728.1</a> , <a href="#">NP_877392.1</a>
<b>RefSeq Size:</b>	3145 bp
<b>RefSeq ORF:</b>	999 bp
<b>Locus ID:</b>	23428
<b>UniProt ID:</b>	<a href="#">Q9UHI5</a>
<b>Cytogenetics:</b>	14q11.2
<b>Protein Families:</b>	Druggable Genome, Transmembrane

**Gene Summary:**

Sodium-independent, high-affinity transport of small and large neutral amino acids such as alanine, serine, threonine, cysteine, phenylalanine, tyrosine, leucine, arginine and tryptophan, when associated with SLC3A2/4F2hc. Acts as an amino acid exchanger. Has higher affinity for L-phenylalanine than LAT1 but lower affinity for glutamine and serine. L-alanine is transported at physiological concentrations. Plays a role in basolateral (re)absorption of neutral amino acids. Involved in the uptake of methylmercury (MeHg) when administered as the L-cysteine or D,L-homocysteine complexes, and hence plays a role in metal ion homeostasis and toxicity. Involved in the cellular activity of small molecular weight nitrosothiols, via the stereoselective transport of L-nitrosocysteine (L-CNSO) across the transmembrane. Plays an essential role in the reabsorption of neutral amino acids from the epithelial cells to the bloodstream in the kidney.[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) differs in the 5' UTR, lacks a portion of the 5' coding region and initiates translation at a downstream, in-frame start codon, compared to variant 1. The encoded isoform (b) has a shorter N-terminus, compared to isoform a.