

## Product datasheet for RC216468

### LAT2 (SLC7A8) (NM\_182728) Human Tagged ORF Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | LAT2 (SLC7A8) (NM_182728) Human Tagged ORF Clone                            |
| Tag:                      | Myc-DDK   |
| Symbol:                   | LAT2  |
| Synonyms:                 | LAT2; LPI-PC1   |
| Mammalian Cell Selection: | Neomycin  |
| Vector:                   | pCMV6-Entry (PS100001)  |
| E. coli Selection:        | Kanamycin (25 ug/mL)  |
| ORF Nucleotide Sequence:  | >RC216468 representing NM_182728.<br>Blue=ORF Red=Cloning site Green=Tag(s) |

```
GCTCGTTTGTGAAACCGTCAGAATTTGTAAACGACTACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGGGATTGTACAGATATGCAAAGGAGAGTACTTCTGGCTGGAGCCAAAGAATGCATTTGAGAATTTCC
CAGGAACCTGACATCGGCCTCGTCGACTGGCTTTCCTTCAGGGCTCCTTGCCTATGGAGGCTGGAAC
TTTCTGAATTACGTGACTGAGGAGCTTGTGATCCCTACAAGAACCTCCAGAGCCATCTTCATCTCC
ATCCCACTGGTCACATTTGTGTATGTCTTGGCAATGTCGCTTATGTCAGTCAATGTCCCCCAGGAG
CTGCTGGCATCCAACGCCGTCGCTGTGACTTTTGGAGAGAAGCTCCTAGGAGTCATGGCCTGGATCATG
CCCATTTCTGTTGCCCTGTCCACATTTGGAGGAGTTAATGGGTCTCTCTCACCTCCTCGGCTGTTC
TTGCTGGAGCCCGAGAGGGCCACCTTCCAGTGTGTTGGCCATGATCCACGTGAAGCGCTGCACCCCA
ATCCAGCCCTGCTCTTCACATGCATCTCCACCCTGCTGATGCTGGTCACCAAGTACATGTACACTC
ATCAACTACGTGGGCTTCATCAACTACCTTCTATGGGGTACAGGTTGCTGGACAGATAGTCTTCGC
TGAAGAAGCCTGATATCCCGGCCCAATCAAGATCAACTGCTGTTCCCATCATCTACTTGTGTTC
TGGGCTTCTGCTGGTCTTCAGCCTGTGGTCAGAGCCGGTGGTGTGGCATTGGCCTGGCCATCATG
CTGACAGGAGTGCCTGTCTATTTCTGGGTGTTTACTGGCAACACAAGCCCAAGTGTTCAGTGACTTC
ATTGAGCTGCTAACCCCTGGTGGCCAGAAGATGTGTGGTGTGTGATACCCCGAGGTGGAGCGGGCTCA
GGGACAGAGGAGGCTAATGAGGACATGGAGGAGCAGCAGCCCATGTACCAACCCACTCCACGAAG
GACAAGGACGTGGCGGGGACGCCAGCC
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
```



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**Protein Sequence:** >Peptide sequence encoded by RC216468  
 Blue=ORF Red=Cloning site Green=Tag(s)

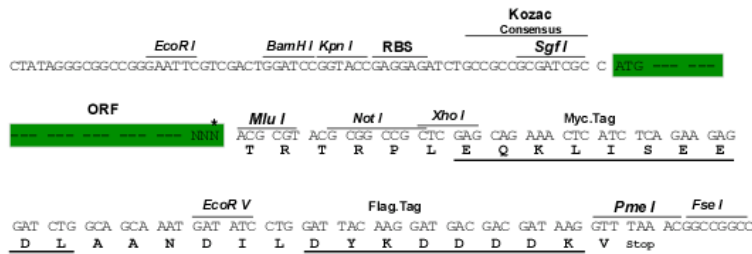
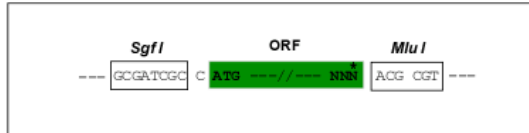
MGIVQICKGEYFWLEPKNAFENFQEPDIGLVALAFLQGSFAYGGWNFLNYVTEELVDPYKNLPRAIFIS  
 IPLVTFVYVAFNAVYVTAMSPQELLASNAVAVTFGEKLLGVMWIMPISVALSTFGGVNGSLFTSSRLF  
 FAGAREGHLPSVLAMIHVKRCTPIPALLFTICISTLLMLVTSDMYTLINLVGFINLVFYGVTVAGQIVLR  
 WKKPDIPRPIKINLLFPIIYLLFWAFLLVFSLWSEPVVCGIGLAIMLTGVPVYFLGVYQHKPKCFSD  
 IELLTLVSQKMCVVVYPEVERGSGTEEANEDMEEQQQPMYQPTPKDKDVAGQPQ  
 TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6553\\_g01.zip](https://cdn.origene.com/chromatograms/mk6553_g01.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



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

**ACCN:** NM\_182728

**ORF Size:** 996 bp

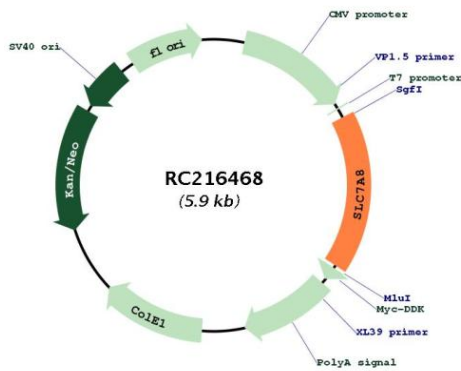
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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.

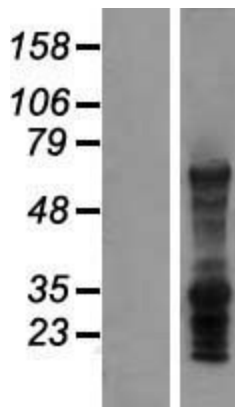
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

|                               |  |
|-------------------------------|--|
| <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 Size:</b>           | 3195 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  |
| <b>MW:</b>                    | 37.2 kDa   |
| <b>Gene Summary:</b>          | 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] |

Product images:



Circular map for RC216468



Western blot validation of overexpression lysate (Cat# [LY405401]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216468 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).