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Product datasheet for RC234079

LAT2 (SLC7A8) (NM_001267036) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	LAT2 (SLC7A8) (NM_001267036) 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:

>RC234079 representing NM_001267036
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGGCAGTATGGGCAGGAGCTTAGCTGGAAGTGTTTGGTAAAAGCTGTGTGCCTCCAGGAGCACTCAC
AGCCCTCACAGCTTCTCTGCACCCTCCTCCTCTGCTGGTGTGTCCTTGGAAGAGAGAGGCCCTTCCGGAA
GGCTCAGAGCACCTCCTCTCCTTTGGAGGGGGTTCCGAGATTTCTAAAACGTTTGCTCCTCACATGGGTC
AACTGTTCCAGTGTGCGGTGGGCCACCCGGGTTCAAGACATCTTCACAGCTGGGAAGCTCCTGGCCTTGG
CCCTGATTATCATCATGGGGATTGTACAGATATGCAAAGGAGAGTACTTCTGGCTGGAGCCAAAGAATGC
ATTTGAGAATTTCCAGGAACCTGACATCGGCCTCGTCGCACTGGCTTTCCTTCAGGGCTCCTTTGCCTAT
GGAGGCTGGAACTTTCTGAATTACGTGACTGAGGAGCTTGTTGATCCCTACAAGAACCTTCCCAGAGCCA
TCTTCATCTCCATCCCACTGGTCACATTTGTGTATGTCTTTGCCAATGTCGCTTATGTCACTGCAATGTC
CCCCCAGGAGCTGCTGGCATCCAACGCCGTCGCTGTGACTTTTGGAGAGAAGCTCCTAGGAGTCATGGCC
TGGATCATGCCCATTTCTGTTGCCCTGTCCACATTTGGAGGAGTTAATGGGTCTCTCTTCACCTCCTCTC
GGCTGTTCTTCGCTGGAGCCCGAGAGGGCCACCTTCCCAGTGTGTTGGCCATGATCCACGTGAAGCGCTG
CACCCCAATCCCAGCCCTGCTCTTCACATGCATCTCCACCCTGCTGATGCTGGTCACCAGCGACATGTAC
ACACTCATCAACTATGTGGGCTTCATCAACTACCTCTTCTATGGGGTCACGGTTGCTGGACAGATAGTCC
TTCGCTGGAAGAAGCCTGATATCCCCCGCCCCATCAAGATCAACCTGCTGTTCCCCATCATCTACTTGCT
GTTCTGGGCCTTCCTGCTGGTCTTCAGCCTGTGGTCAGAGCCGGTGGTGTGTGGCATTGGCCTGGCCATC
ATGCTGACAGGAGTGCCTGTCTATTTCCTGGGTGTTTACTGGCAACACAAGCCCAAGTGTTTCAGTGACT
TCATTGAGCTGCTAACCCTGGTGAGCCAGAAGATGTGTGTGGTCGTGTACCCCGAGGTGGAGCGGGGCTC
AGGGACAGAGGAGGCTAATGAGGACATGGAGGAGCAGCAGCAGCCCATGTACCAACCCACTCCCACGAAG
GACAAGGACGTGGCGGGGCAGCCCCAGCCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

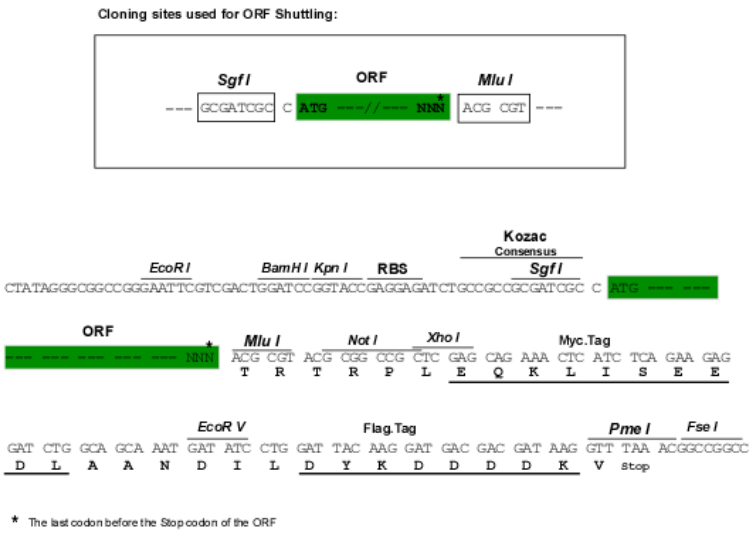
>RC234079 representing NM_001267036
Red=Cloning site Green=Tags(s)

MGQYGQELSWKCLVKAVCLQEHSQPSQLLCTLLLCWCVLGRERPFRKAQSTSSPLEGVPRFLKRLLLTWV
NCSSVRWATRVQDIFTAGKLLALALIIIMGIVQICKGEYFWLEPKNAFENFQEPDIGLVALAFLQGSFAY
GGWNFLNYVTEELVDPYKNLPRAIFISIPLVTFVYVFANVAYVTAMSPQELLASNAVAVTFGEKLLGVMA
WIMPISVALSTFGGVNGSLFTSSRLFFAGAREGHLPSVLAMIHVKRCTPIPALLFTCISTLLMLVTSDMY
TLINYVGFINYLFYGVTVAGQIVLRWKKPDIPRPIKINLLFPIIYLLFWAFLLVFSLWSEPVVCGIGLAI
MLTGVPVYFLGVYWQHKPKCFSDFIELLTLVSQKMCVVVYPEVERGSGTEEANEDMEEQQQPMYQPTPTK
DKDVAGQPQP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001267036

ORF Size: 1290 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_001267036.1, NP_001253965.1

RefSeq Size: 3296 bp

RefSeq ORF: 1293 bp

Locus ID: 23428

UniProt ID: Q9UHI5

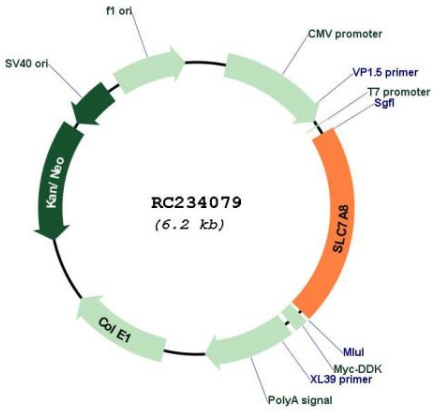
Cytogenetics: 14q11.2

Protein Families: Druggable Genome, Transmembrane

MW: 48.7 kDa

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]

Product images:



Circular map for RC234079