

Product datasheet for **RR207681**

Slc38a9 (NM_001035251) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Slc38a9 (NM_001035251) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Slc38a9
Synonyms:	RGD1311881
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RR207681 representing NM_001035251
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGCATCGCC

ATGGCAAACGTGGATAGTGAAGTCTAGGCATCTTATCTCTGAGGTAGAACATGAAGTGAATCCCGGACCTA
 TGAATATCCAGTTTGACTCCTCAGACCTAAGATCTAAAAGGCCTTTCTATATAGAGCCTACCAACATCGT
 CAATGTGAATGATGTCATTGAGAGGTACGACCATGCTGCTGCTATGAACAAGCGGATTCATTACTAC
 AGCCGGCTCACCCTCCTGCAGACAAGGCACTGATTGCTCCAGACCAGTAGTTCCTGCTCCAGAGGAAT
 GCTATGTGTACAGTCCATTGGGCTCTGCCTATAAACTTAAGAGTTACACTGAAGGCTATCGTAAAAACAC
 CAGCTTAGTTACTATTTTATGATCTGGAATACCATGATGGGGACATCTATACTAAGTATTCCTGGGGC
 AAAAAACAGGCTGGATTTACTACTGGGATGTGTGTCATCGTCTGATGGGCCTTCTAACCTTTACTGCT
 GCTATAGAGTGGTGAAGTCCCGGAGTATGATAGTTACATCGACACAACCTACCTGGGAATATCCAGATGT
 CTGCAACATTACTTTGGCTCTTTTGGCAATGGTCAAGTCTCCTTTCTCCTTGGTGTCTCTCATTGGA
 GCAATGATAGTTTATTGGGTGCTTATGTCTAATTTCTTTTAACTGGAAAGTTATTTTAAATTTTA
 TTCATCACATTAATGACACAGACACTGACTGAGCACCAATAATAGCAGCCCTGTGATCTGTCCAAGCGC
 CGGGAGTGGCCATCCTGACAACAGCTCCATGATCTTCTACAACAGTGACACGGAGGTGCGGCTGTTTGA
 AGGTGGTGGGACAAGTCCAAGACAGTGCCCTTCTACCTTATAGGGCTCCTCTTGGCGCTGCTCAACTTCA
 AGTCTCCTTCTGTTCTTCTCCAAATTTAATATCCTGGGTACGGTATCTGTCTCTATTTGATTTTCAATTGT
 TACCCTGAAGGCTATTCGCTTAGGATCCATCTGGAATTTCACTGGTTTGGCCAAACAGAAATTTTGTGA
 CCAGAGATAAGAGCTCAGTTTCCACAGCTGACAGGGGTGCTTACTCTGGCCTTCTTTATTCACAATTGTA
 TCATCACACTCTTGAAAAACAACAAGAACAAGAAATAATGTGAGAGACCTGTGCAATTGCTTATATGCT
 GGTGACATTGACCTATCTCTATATTGGTGTCTGCTGTTTTTGCCTATTCCCTTCACCTCCATTACCCAAA
 GATTGTATTGAACAGAACTTCTTGGACAACCTCCCGAGCAGTGACACCCTGTCTTCATTGCACGGATAT
 GCCTGCTCTTCCAGATGATGACTGTGTACCCACTCTTAGGCTACTTGGCTCGCGTTCAGCTCCTGGGCCA
 TATCTTCGGTGACATTTATCCTAGCATTTTCCATGTGCTGATTCTTAACCTAATTATCGTGGGTGCTGGA
 GTGACCATGGCCTGTTTCTACCCAAACATAGGAGGGATCATAAGGTACTCGGGAGCAGCGTGGCGCTGG
 CTTTCGTGTTTATACCTTCTCTCATCTATATACTCTCCAGCACCAAGAGGAGCGTCTGACATGGCC
 TAAGTTAGTGTTCACATCATCATCATTTTGGGCTGGCGAACCTGATTGCTCAGTTTTTTCATG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RR207681 representing NM_001035251
 Red=Cloning site Green=Tags(s)

MANVDSRHLISEVEHEVNPMPNIIQFDSSDLRSRPFYIEPTNIVNVNDVIQKVS DHAAAMNKRIHYY
 SRLTTPADKAL IAPDHVVPAP EECYVYSPLGSAYKLKSYTEGYRKNTSLVTIFMIWNTMMGTSILSIPWG
 IKQAGFTTGMCVIVLMGLLTL YCCYRVVKSRSMI VTS DTTTWEYPDVCKHYFGSFGQWSSLLFSLVSLIG
 AMIVYWVLM SNFLFNTGKFIFNF IHHINDTDTLSTNNSSPVICPSAGSGHPDNSSMIFYNSDTEVRLFE
 RWWDKSKTVPFYLIGLLPLLNFKSPSFFSKFNILGTVSVLYLIFIVTLKAIRLGFHLEFWFAPTTEFFV
 PEIRAQFPQLTGVLTAFFIHNCIITLLKNNKNQENNVRLCIAYMLVTLTYLYIGVLVFASFSPPLPK
 DCIEQNFLDNFPSSDTLSFIARICLLFQMMTVYPLLGYLARVQLLGHIFGDIYPSIFHVLILNLIIVGAG
 VTMACFYPNIGGIIRYSGAACGLAFVFIYPSLIYILSQHQEERLTWPKLVFHIIIIILGLANLIAQFFM

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM 001035251

ORF Size: 1677 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_001035251.1](#), [NP_001030328.1](#)

RefSeq Size: 1807 bp

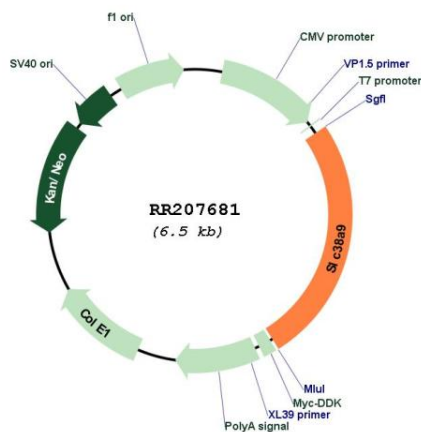
RefSeq ORF: 1680 bp

Locus ID: 310091

UniProt ID: [Q3B8Q3](#)

Cytogenetics:	2q14
MW:	63.4 kDa
Gene Summary:	Lysosomal amino acid transporter involved in the activation of mTORC1 in response to amino acid levels. Probably acts as an amino acid sensor of the Rag GTPases and Ragulator complexes, 2 complexes involved in amino acid sensing and activation of mTORC1, a signaling complex promoting cell growth in response to growth factors, energy levels, and amino acids. Following activation by amino acids, the Ragulator and Rag GTPases function as a scaffold recruiting mTORC1 to lysosomes where it is in turn activated. SLC38A9 mediates transport of amino acids with low capacity and specificity with a slight preference for polar amino acids. Acts as an arginine sensor. Following activation by arginine binding, mediates transport of leucine, tyrosine and phenylalanine with high efficiency, and is required for the efficient utilization of these amino acids after lysosomal protein degradation. [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RR207681