

Product datasheet for **RR214200**

Lamtor1 (NM_199102) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Lamtor1 (NM_199102) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Lamtor1
Synonyms:	p18
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RR214200 representing NM_199102 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGGTGCTGCTATAGCAGCGAAAACGAGGACTCGGACCAGGACCAGGAGGAGAGGAAGCTGTTGTTGG
ACCCAGTAACACCCCTACCAAAGCCCTCAATGGAGCCGAGCCAGCTACCATAGCCTGCCTTCAGCTCG
CACAGATGAGCAGGCCCTGCTTTCCTCCATCCTTGCCAAGACAGCTAGCAACATCATTGATGTGTCTGCC
GCAGACTCCAGGGCATGGAGCAGCATGAGTACATGGACCGGCAAGGCAGTACGTACCCGCTTGCTG
TGCTTAGCAGCAGTCTGACCCATTGGAAGAAGCTGCCACCGCTGCCATCTCTACCAGCCAGCCCCACCA
AGTGCTGGCCAGCGAGCCTATCCCTTCTCTGACTTGCAGCAGGTCTCCAGGATAGCTGCTTATGCCTAT
AGTGCACTTTCTCAGATCCGCGTGGATGCGAAAGAAGAGCTGGTTGTACAGTTTGGGATCCCA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:	>RR214200 representing NM_199102 Red=Cloning site Green=Tags(s)
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MGCCYSSENEDSDQDQEERKLLLDPSNTPKALNGAEPYHSLPSARTDEQALLSSILAKTASNIIDVSA
ADSQMEQHEYMDRARQYSTRLAVLSSSLTHWKKLPPLPSLTSPHQVLAASEPIPFSDLQVSRIAAYAY
SALSQIRVDAKEELVVQFGIP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:	Sgfl-MluI
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Cloning Scheme:



ACCN: NM_199102

ORF Size: 483 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_199102.1](#), [NP_954533.1](#)

RefSeq Size: 1118 bp

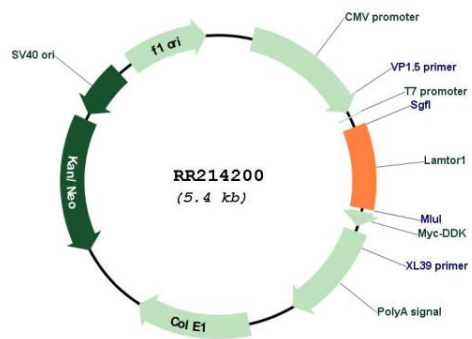
RefSeq ORF: 486 bp

Locus ID: 308869

UniProt ID: [Q6P791](#)

Cytogenetics:	1q32
MW:	17.7 kDa
Gene Summary:	<p>As part of the Ragulator complex it is 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. Activated by amino acids through a mechanism involving the lysosomal V-ATPase, the Ragulator functions as a guanine nucleotide exchange factor activating the small GTPases Rag. Activated Ragulator and Rag GTPases function as a scaffold recruiting mTORC1 to lysosomes where it is in turn activated. LAMTOR1 is directly responsible for anchoring the Ragulator complex to membranes. Also required for late endosomes/lysosomes biogenesis it may regulate both the recycling of receptors through endosomes and the MAPK signaling pathway through recruitment of some of its components to late endosomes. May be involved in cholesterol homeostasis regulating LDL uptake and cholesterol release from late endosomes/lysosomes. May also play a role in RHOA activation (By similarity).[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for RR214200