

## Product datasheet for **RN214200**

### Lamtor1 (NM\_199102) Rat Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Lamtor1 (NM\_199102) Rat Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Lamtor1  
**Synonyms:** p18  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >RN214200 representing NM\_199102  
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGCC**

ATGGGGTCTGCTATAGCAGCGAAAACGAGGACTCGGACCAGGACCAGGAGGAGAGGAAGCTGTTGTTGG  
ACCCAGTAACACCCCTACCAAAGCCCTCAATGGAGCCGAGCCAGCTACCATAGCCTGCCTTCAGCTCG  
CACAGATGAGCAGGCCCTGCTTTCTCCATCCTTGCCAAGACAGCTAGCAACATCATTGATGTGTCTGCC  
GCAGACTCCAGGGCATGGAGCAGCATGAGTACATGGACCGGGCAAGGCAGTACAGTACCCGCTTGCTG  
TGCTTAGCAGCAGTCTGACCCATTGGAAGAAGCTGCCACCGCTGCCATCTCTACCAGCCAGCCCCACCA  
AGTGCTGGCCAGCGAGCCTATCCCTTCTCTGACTTGCAGCAGGTCTCCAGGATAGCTGCTTATGCCTAT  
AGTGCACCTTCTCAGATCCGCGTGGATGCGAAAGAAGAGCTGGTTGTACAGTTTGGGATCCCA**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI  
**ACCN:** NM\_199102  
**Insert Size:** 486 bp  
**OTI Disclaimer:**

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).



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<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>	<u><a href="#">NM_199102.1</a></u> , <u><a href="#">NP_954533.1</a></u>
<b>RefSeq Size:</b>	1118 bp
<b>RefSeq ORF:</b>	486 bp
<b>Locus ID:</b>	308869
<b>UniProt ID:</b>	<u><a href="#">Q6P791</a></u>
<b>Cytogenetics:</b>	1q32
<b>Gene Summary:</b>	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]