

Product datasheet for RR207526L4

Atg7 (NM_001012097) Rat Tagged Lenti ORF Clone

Product data:

Product Type: Expression Plasmids

Product Name: Atg7 (NM_001012097) Rat Tagged Lenti ORF Clone

Tag:mGFPSymbol:Atg7Synonyms:Apg7l

Mammalian Cell Puromycin

Selection:

Vector: pLenti-C-mGFP-P2A-Puro (PS100093)

E. coli Selection: Chloramphenicol (34 ug/mL)

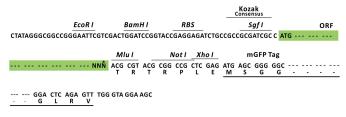
ORF Nucleotide The ORF insert of this clone is exactly the same as(RR207526).

Sequence:

Restriction Sites: Sgfl-Mlul

Cloning Scheme:





^{*} The last codon before the Stop codon of the ORF

ACCN: NM_001012097

ORF Size: 2094 bp



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Atg7 (NM_001012097) Rat Tagged Lenti ORF Clone - RR207526L4

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: <u>NM 001012097.1</u>, <u>NP 001012097.1</u>

 RefSeq Size:
 2386 bp

 RefSeq ORF:
 2097 bp

 Locus ID:
 312647

 UniProt ID:
 Q641Y5

 Cytogenetics:
 4q42

Gene Summary: E1-like activating enzyme involved in the 2 ubiquitin-like systems required for cytoplasm to

vacuole transport (Cvt) and autophagy. Activates ATG12 for its conjugation with ATG5 as well as the ATG8 family proteins for their conjugation with phosphatidylethanolamine. Both

systems are needed for the ATG8 association to Cvt vesicles and autophagosomes

membranes. Required for autophagic death induced by caspase-8 inhibition. Required for mitophagy which contributes to regulate mitochondrial quantity and quality by eliminating the mitochondria to a basal level to fulfill cellular energy requirements and preventing excess

ROS production. Modulates p53/TP53 activity to regulate cell cycle and survival during metabolic stress. Plays also a key role in the maintenance of axonal homeostasis, the prevention of axonal degeneration, the maintenance of hematopoietic stem cells, the

formation of Paneth cell granules, as well as in adipose differentiation (By similarity). Plays a role in regulating the liver clock and glucose metabolism by mediating the autophagic

degradation of CRY1 (clock repressor) in a time-dependent manner (By similarity).

[UniProtKB/Swiss-Prot Function]