

## LAMTOR1 Protein, Human, Recombinant (His)

### General Information

Synonyms:	Protein associated with DRMs and endosomes;p27Kip1-releasing factor from RhoA (p27RF-Rho);C11orf59;Late endosomal/lysosomal adaptor and MAPK and MTOR activator 1; Ragulator complex protein LAMTOR1;LAMTOR1;Lipid raft adaptor protein p18;PDRO
Protein Construction:	2-161 aa
Species:	Human
Expression Host:	E. coli
Accession:	Q6IAA8
Molecular Weight:	21.7 kDa (predicted)
AA Sequence:	GCCYSSNEDSDQDREERKLLLDPPSPPTKALNGAEPNYHSLPSARTDEQALLSSILAKTASNIIDVSAADSQG MEQHEYMDRARQYSTR LAVLSSSLTHWKKLPPLPSLT SQPHQVLASEPIPFSDLQQVSRIAAYAYSALSQIRV DAKEELVVQFGIP

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

#### Shipping:

In general, Lyophilized powders are shipping with blue ice. Solutions are shipping with dry ice.

### Protein Background

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.

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