

LAMTOR1 | p18 Recombinant Rabbit mAb

Catalog # AP96698

Product Information

Application	WB, IHC-P, IHC-F, IF, IP, E
Primary Accession	Q6IAA8
Other Accession	Q6IAA8
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	17745
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the LAMTOR1 family.
Background Descriptions	Enables GTPase binding activity and protein-membrane adaptor activity. Contributes to guanyl-nucleotide exchange factor activity and molecular adaptor activity. Involved in several processes, including cholesterol homeostasis; positive regulation of TORC1 signaling; and regulation of cholesterol transport. Located in lysosome. Part of FNIP-folliculin RagC/D GAP. Is active in Ragulator complex and lysosomal membrane. [provided by Alliance of Genome Resources, Apr 2025]

Additional Information

Gene ID	55004
Other Names	C11orf59; PDRO; Ragulator1; p18; p27RF-Rho; LTOR1_HUMAN; LAMTOR1; Late endosomal/lysosomal adaptor and MAPK and MTOR activator 1; Lipid raft adaptor protein p18; Protein associated with DRMs and endosomes; p27Kip1-releasing factor from RhoA (p27RF-Rho); late endosomal/lysosomal adaptor, MAPK and MTOR activator 1; chromosome 11 open reading frame 59; p27kip1 releasing factor from RhoA; Ragulator complex protein LAMTOR1; p27Kip1-releasing factor from RhoA
Dilution	IHC-P=1:50-200,IHC-F=1:50-200,WB=1:500-2000,IF=1:50-200,ELISA=1:5000-10000,IP=1:50-200
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	LAMTOR1 {ECO:0000303 PubMed:31001086,
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Function

Key component of the Ragulator complex, a multiprotein complex 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 (PubMed:[20381137](#), PubMed:[22980980](#), PubMed:[29158492](#)). Activated by amino acids through a mechanism involving the lysosomal V-ATPase, the Ragulator plays a dual role for the small GTPases Rag (RagA/RRAGA, RagB/RRAGB, RagC/RRAGC and/or RagD/RRAGD): it (1) acts as a guanine nucleotide exchange factor (GEF), activating the small GTPases Rag and (2) mediates recruitment of Rag GTPases to the lysosome membrane (PubMed:[22053050](#), PubMed:[22980980](#), PubMed:[28935770](#), PubMed:[29158492](#), PubMed:[30181260](#), PubMed:[31001086](#), PubMed:[32686708](#), PubMed:[36476874](#)). Activated Ragulator and Rag GTPases function as a scaffold recruiting mTORC1 to lysosomes where it is in turn activated (PubMed:[20381137](#), PubMed:[22980980](#), PubMed:[29158492](#)). LAMTOR1 is directly responsible for anchoring the Ragulator complex to the lysosomal membrane (PubMed:[31001086](#), PubMed:[32686708](#)). LAMTOR1 wraps around the other subunits of the Ragulator complex to hold them in place and interacts with the Rag GTPases, thereby playing a key role in the recruitment of the mTORC1 complex to lysosomes (PubMed:[28935770](#), PubMed:[29107538](#), PubMed:[29123114](#), PubMed:[29285400](#)). Also involved in the control of embryonic stem cells differentiation via non-canonical RagC/RRAGC and RagD/RRAGD activation: together with FLCN, it is necessary to recruit and activate RagC/RRAGC and RagD/RRAGD at the lysosomes, and to induce exit of embryonic stem cells from pluripotency via non-canonical, mTOR-independent TFE3 inactivation (By similarity). 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 (PubMed:[20381137](#), PubMed:[22980980](#)). May be involved in cholesterol homeostasis regulating LDL uptake and cholesterol release from late endosomes/lysosomes (PubMed:[20544018](#)). May also play a role in RHOA activation (PubMed:[19654316](#)).

Cellular Location

Lysosome membrane; Lipid-anchor; Cytoplasmic side. Late endosome membrane; Lipid-anchor; Cytoplasmic side. Note=Recruited to lysosome and endosome membranes through N-terminal myristoylation and palmitoylation

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