

LAMTOR1/C11orf59 (PT1593R) PT™ Rabbit mAb

CatalogNo: YM9435 **Recombinant** 

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB, IHC, IF, IP, ELISA

MW

- 18kD (Calculated)
- 18kD (Observed)

Isotype

- IgG, Kappa

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)**Formulation** PBS, 50% glycerol, 0.05% Proclin 300, 0.05% BSA

Recommended Dilution Ratios

IHC 1:200-1:1000**WB 1:2000-1:10000****IF 1:200-1:1000****ELISA 1:5000-1:20000****IP 1:50-1:200**

Basic Information

Clonality Monoclonal**Clone Number** PT1593R

Immunogen Information

Specificity Endogenous

| Target Information

Gene name LAMTOR1 C11orf59 PDRO PP7157

Protein Name Regulator complex protein LAMTOR1

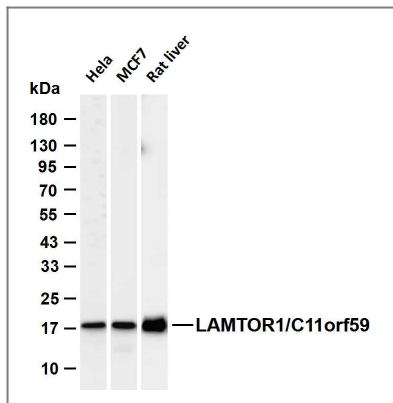
Organism	Gene ID	UniProt ID
Human	55004 ;	Q6IAA8 ;
Mouse	66508 ;	Q9CQ22 ;
Rat	308869 ;	Q6P791 ;

Cellular Localization lysosome membrane; Lipid-anchor Late endosome membrane; Lipid-anchor Note: Recruited to lysosome and endosome membranes through N-terminal myristoylation and palmitoylation.

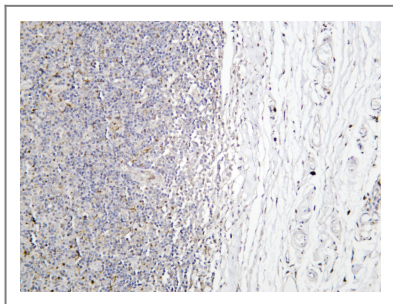
Tissue specificity Down-regulated by cholesterol (at protein level).

Function Key component of the Regulator 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 Regulator 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:22980980, PubMed:28935770, PubMed:29158492, PubMed:30181260, PubMed:31001086, PubMed:32686708, PubMed:36476874). Activated Regulator 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 Regulator complex to the lysosomal membrane (PubMed:31001086, PubMed:32686708). LAMTOR1 wraps around the other subunits of the Regulator 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).

| Validation Data



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-LAMTOR1/C11orf59 (PT1593R) antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: HeLa Lane 2: MCF7 Lane 3: Rat liver Predicted band size: 18kDa Observed band size: 18kDa



Human tonsil was stained with anti-LAMTOR1/C11orf59 (PT1593R) Rabbit antibody

Contact information

Orders: order@immunoway.com
 Support: tech@immunoway.com
 Telephone: 877-594-3616 (Toll Free), 408-747-0185
 Website: <http://www.immunoway.com>
 Address: 2200 Ringwood Ave San Jose, CA 95131 USA



Please scan the QR code to access additional product information:
LAMTOR1/C11orf59 (PT1593R) PT™ Rabbit mAb

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