

LAMTOR2 Antibody
Catalog # ASC11768**Specification**

LAMTOR2 Antibody - Product Information

Application	WB, IHC-P, IF, E
Primary Accession	O9Y2Q5
Other Accession	NP_054736 , 7661728
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 14 kDa

Application Notes	Observed: 16 kDa KDa LAMTOR2 antibody can be used for detection of LAMTOR2 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.
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LAMTOR2 Antibody - Additional Information

Gene ID **28956**

Target/Specificity

LAMTOR2; LAMTOR2 antibody is human, mouse and rat reactive. At least two isoforms of LAMTOR2 are known to exist; this antibody will detect both isoforms. LAMTOR2 antibody is predicted to not cross-react with other LAMTOR family proteins.

Reconstitution & Storage

LAMTOR2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

Precautions

LAMTOR2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

LAMTOR2 Antibody - Protein Information

Name LAMTOR2 ([HGNC:29796](#))

Synonyms MAPBPIP, ROBLD3

Function

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 (PubMed: <http://www.uniprot.org/citations/20381137> target="_blank">20381137, PubMed: <http://www.uniprot.org/citations/28935770> target="_blank">28935770, PubMed: <http://www.uniprot.org/citations/29107538> target="_blank">29107538)

target="_blank">29107538, PubMed:29123114, 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:22980980, PubMed:28935770, PubMed:29107538, PubMed:29123114, PubMed:29158492, PubMed:30181260). Activated Ragulator and Rag GTPases function as a scaffold recruiting mTORC1 to lysosomes where it is in turn activated (PubMed:22980980, PubMed:29107538, PubMed:29123114, PubMed:29158492). Adapter protein that enhances the efficiency of the MAP kinase cascade facilitating the activation of MAPK2 (By similarity).

Cellular Location

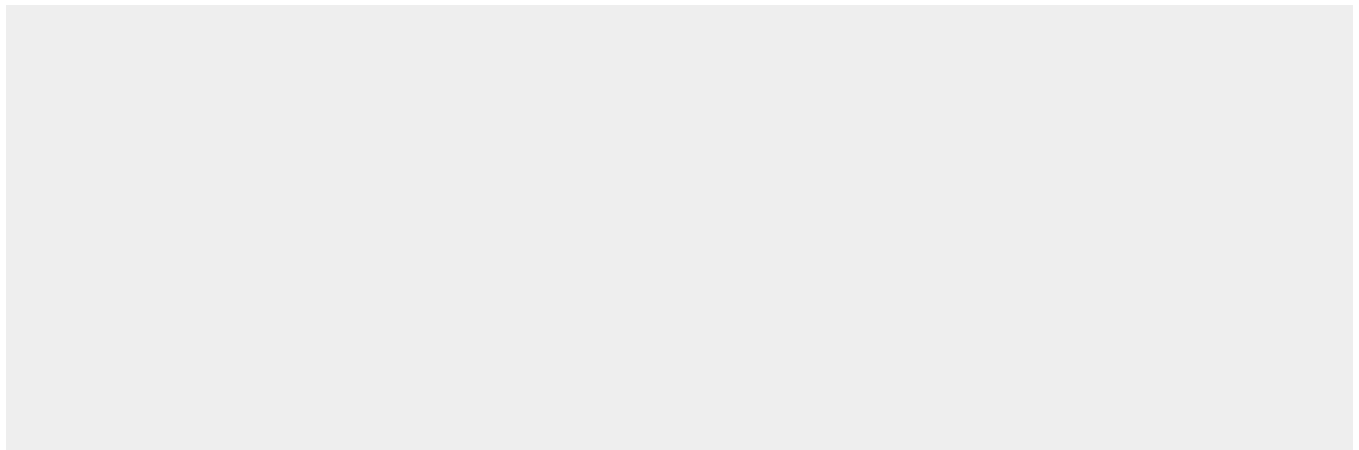
Late endosome membrane {ECO:0000250|UniProtKB:Q9JHS3}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q9JHS3}; Cytoplasmic side {ECO:0000250|UniProtKB:Q9JHS3}. Lysosome membrane; Peripheral membrane protein {ECO:0000250|UniProtKB:Q9JHS3}; Cytoplasmic side {ECO:0000250|UniProtKB:Q9JHS3}. Note=Recruited to lysosome and endosome membranes by LAMTOR1. {ECO:0000250|UniProtKB:Q9JHS3}

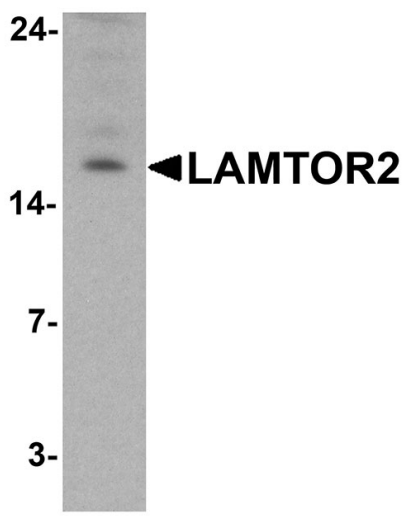
LAMTOR2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

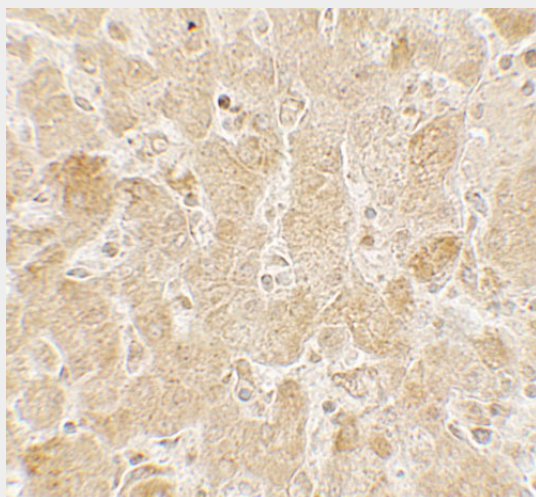
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

LAMTOR2 Antibody - Images

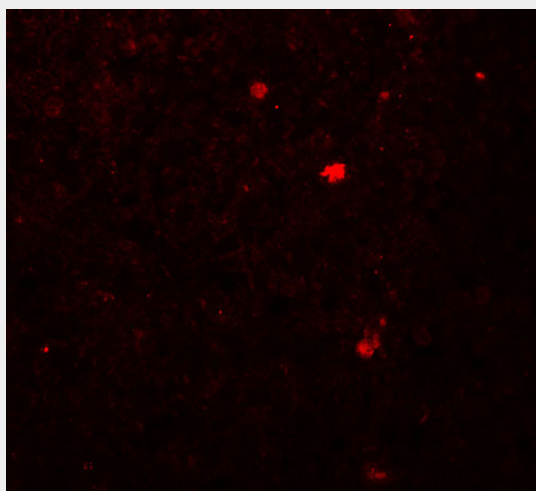




Western blot analysis of LAMTOR2 in HepG2 cell lysate with LAMTOR2 antibody at 1 µg/ml.



Immunohistochemistry of LAMTOR2 in human spleen tissue with LAMTOR2 antibody at 5 µg/mL.



Immunofluorescence of LAMTOR2 in human spleen tissue with LAMTOR2 antibody at 20 µg/mL.

LAMTOR2 Antibody - Background

The late endosomal/lysosomal adaptor MAPK and MTOR activator 2 (LAMTOR2) protein belongs to

the LAMTOR family of proteins, and together with LAMTOR3 and the MAPK1 and ERK kinase 1 (MEK1) localizes to late endosomes where it is required for the efficient activation of ERK signaling (1,2). This complex is involved in the regulation of late endosomal traffic and cellular proliferation (3) and plays a role in cellular host defense against Salmonella infection (4).

LAMTOR2 Antibody - References

Wunderlich W, Fialka I, Teis D, et al. A novel 14-kilodalton protein interacts with the mitogen-activated protein kinase scaffold MP1 on a late endosomal/lysosomal compartment. J. Cell Biol. 2001; 152:765-76.

Teis D, Wunderlich W, and Huber LA. Localization of the MP1-MAPK scaffold complex to endosomes is mediated by p14 and required for signal transduction. Dev. Cell 2002; 3:803-14.

Teis D, Taub N, Kurzbauer R, et al. p14-MP1-MEK1 signaling regulates endosomal traffic and cellular proliferation during tissue homeostasis. J. Cell Biol. 2006; 175:861-8.

Taub N, Nairz M, Hilber D, et al. The late endosomal adaptor p14 is a macrophage host-defense factor against Salmonella infection. J. Cell Sci. 2012; 125:2698-708.