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LAMTOR3 Antibody
Catalog # ASC11769

Specification

LAMTOR3 Antibody - Product Information

Application	**WB, IHC-P, IF, E**
Primary Accession	Q9UHA4
Other Accession	NP_068805, 11496277
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 14 kDa** **Observed: 13 kDa KDa**
Application Notes	**LAMTOR3 antibody can be used for detection of LAMTOR3 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.**

LAMTOR3 Antibody - Additional Information

Gene ID **8649**

Target/Specificity
LAMTOR3; LAMTOR3 antibody is human, mouse and rat reactive. At least two isoforms of LAMTOR3 are known to exist; this antibody will detect both isoforms. LAMTOR3 antibody is predicted to not cross-react with other LAMTOR family proteins.

Reconstitution & Storage
LAMTOR3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
LAMTOR3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

LAMTOR3 Antibody - Protein Information

Name LAMTOR3 (HGNC:15606)

Synonyms MAP2K1IP1, MAPKSP1

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:20381137, PubMed:22980980, PubMed:<a href="http://www.uniprot.org/citations/28935770"

target="_blank">28935770, PubMed:29107538, PubMed:29123114, PubMed:29158492, PubMed:30181260). 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:28935770, PubMed:29107538, PubMed:29123114, PubMed:29158492, PubMed:30181260). 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:O88653}; Peripheral membrane protein {ECO:0000250|UniProtKB:O88653}; Cytoplasmic side {ECO:0000250|UniProtKB:O88653}. Note=Recruited to lysosome and endosome membranes by LAMTOR1. {ECO:0000250|UniProtKB:O88653}

LAMTOR3 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 Cytomety
- Cell Culture

LAMTOR3 Antibody - Images

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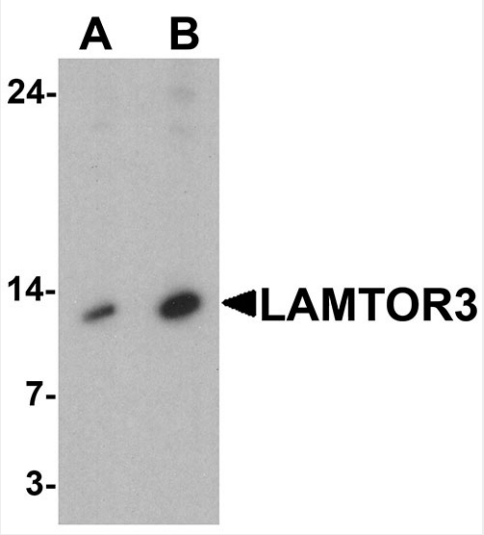
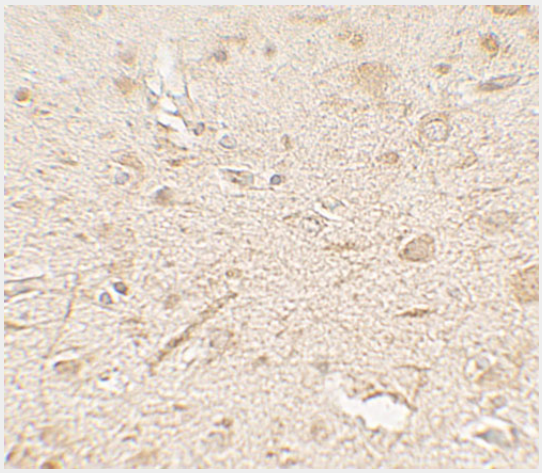
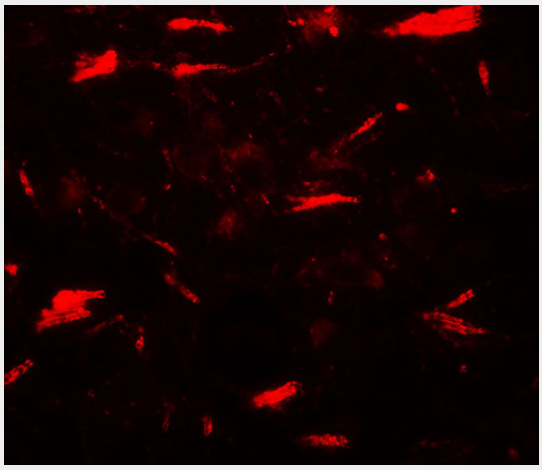


Western blot analysis of LAMTOR3 in human brain tissue lysate with LAMTOR3 antibody at (A) 1 and (B) 2 µg/ml



Immunohistochemistry of LAMTOR3 in human brain tissue with LAMTOR3 antibody at 5 µg/mL.



Immunofluorescence of LAMTOR3 in human brain tissue with LAMTOR3 antibody at 20 µg/mL.

LAMTOR3 Antibody - Background

The late endosomal/lysosomal adaptor MAPK and MTOR activator 3 (LAMTOR3) protein belongs to

the LAMTOR family of proteins, and together with LAMTOR2 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).

LAMTOR3 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.