

RPTOR Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8442b

Specification

RPTOR Antibody - Product Information

Application	WB, IHC-P,E
Primary Accession	Q8N122
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1,k
Calculated MW	149038
Antigen Region	1005-1329

RPTOR Antibody - Additional Information

Gene ID 57521

Other Names

Regulatory-associated protein of mTOR, Raptor, p150 target of rapamycin (TOR)-scaffold protein, RPTOR, KIAA1303, RAPTOR

Target/Specificity

This RPTOR antibody is generated from a mouse immunized with recombinant protein.

Dilution

WB~~1:500-1:1000
IHC-P~~1:25

Format

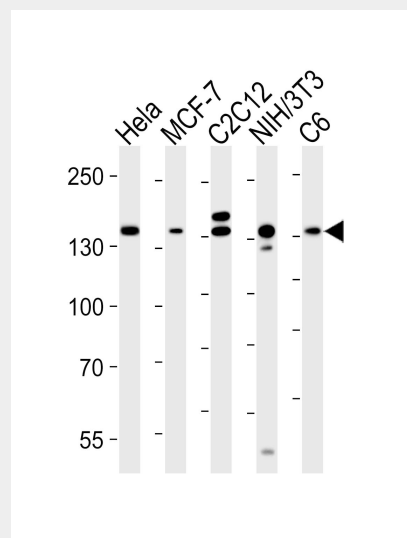
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

Storage

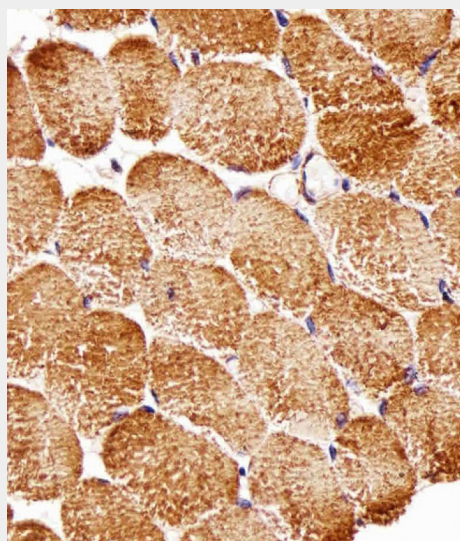
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

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



Western blot analysis of lysates from HeLa, MCF-7, mouse C2C12, mouse NIH/3T3, rat C6 cell line (from left to right), using RPTOR Antibody(Cat. #AM8442b). AM8442b was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20µg per lane.



Immunohistochemical analysis of paraffin-embedded H. skeletal muscle section using RPTOR Antibody(Cat#AM8442b).

RPTOR Antibody - Protein Information**Name** RPTOR ([HGNC:30287](#))**Synonyms** KIAA1303, RAPTOR**Function**

Involved in the control of the mammalian target of rapamycin complex 1 (mTORC1) activity which regulates cell growth and survival, and autophagy in response to nutrient and hormonal signals; functions as a scaffold for recruiting mTORC1 substrates. mTORC1 is activated in response to growth factors or amino acids. Growth factor-stimulated mTORC1 activation involves a AKT1-mediated phosphorylation of TSC1- TSC2, which leads to the activation of the RHEB GTPase that potentially activates the protein kinase activity of mTORC1. Amino acid-signaling to mTORC1 requires its relocalization to the lysosomes mediated by the Ragulator complex and the Rag GTPases. Activated mTORC1 up-regulates protein synthesis by phosphorylating key regulators of mRNA translation and ribosome synthesis. mTORC1 phosphorylates EIF4EBP1 and releases it from inhibiting the elongation initiation factor 4E (eIF4E). mTORC1 phosphorylates and activates S6K1 at 'Thr-389', which then promotes protein synthesis by phosphorylating PDCD4 and targeting it for degradation. Involved in ciliogenesis. mTORC1 complex in excitatory neuronal transmission is required for the prosocial behavior induced by the psychoactive substance lysergic acid diethylamide (LSD) (By similarity).

Cellular Location

Cytoplasm. Lysosome. Cytoplasmic granule. Note=Targeting to lysosomes depends on amino acid availability. In arsenite-stressed cells, accumulates in stress granules when associated with SPAG5 and association with lysosomes is drastically decreased

Tissue Location

Highly expressed in skeletal muscle, and in a lesser extent in brain, lung, small intestine, kidney and placenta Isoform 3 is widely expressed, with highest levels in nasal mucosa and pituitary and lowest in spleen.

AM8442b was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

RPTOR Antibody - Background

Involved in the control of the mammalian target of rapamycin complex 1 (mTORC1) activity which regulates cell growth and survival, and autophagy in response to nutrient and hormonal signals; functions as a scaffold for recruiting mTORC1 substrates. mTORC1 is activated in response to growth factors or amino acids. Growth factor-stimulated mTORC1 activation involves a AKT1- mediated phosphorylation of TSC1-TSC2, which leads to the activation of the RHEB GTPase that potentially activates the protein kinase activity of mTORC1. Amino acid-signaling to mTORC1 requires its relocalization to the lysosomes mediated by the Ragulator complex and the Rag GTPases. Activated mTORC1 up-regulates protein synthesis by phosphorylating key regulators of mRNA translation and ribosome synthesis. mTORC1 phosphorylates EIF4EBP1 and releases it from inhibiting the elongation initiation factor 4E (eIF4E). mTORC1 phosphorylates and activates S6K1 at 'Thr-389', which then promotes protein synthesis by phosphorylating PDCD4 and targeting it for degradation. Involved in ciliogenesis.

RPTOR Antibody - References

Kim D.-H.,et al.Cell 110:163-175(2002).
Hara K.,et al.Cell 110:177-189(2002).
Zody M.C.,et al.Nature 440:1045-1049(2006).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Nagase T.,et al.DNA Res. 7:65-73(2000).

RPTOR 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](#)