Product Name: RPTOR Mouse Monoclonal Antibody
Catalog #: AMM85967
For research use only.

Summary

Description	Mouse monoclonal Antibody
Host	Mouse
Application	WB,IHC
Reactivity	Human, Mouse, Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Mouse IgG1
Clonality	Monoclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Purified antibody in PBS with 0.05% sodium azide.
Purification	Affinity Purification

Application

Dilution Ratio	WB 1:500-1:1000,IHC 1:100-1:500
Molecular Weight	149kDa

Antigen Information

Gene Name	RPTOR
Alternative Names	Regulatory-associated protein of mTOR, Raptor, p150 target of rapamycin (TOR)-scaffold protein, RPTOR, KIAA1303, RAPTOR
Gene ID	57521.0
SwissProt ID	Q8N122
Immunogen	This RPTOR antibody is generated from a mouse immunized with recombinant protein.

Background

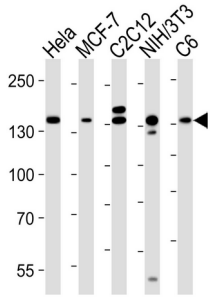
Involved in the control of the mammalian target of rapamycin complex 1 (mTORC1) activity which regulates cell growth and survival, and autophagy in response to nutrient and hormonal signals; functions as a scaffold for recruiting mTORC1 substrates.

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 potently 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.

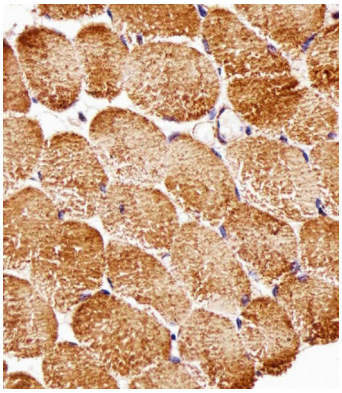
Research Area

PI3K-Akt signaling pathway,mTOR signaling pathway

Image Data



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. RPTOR Mouse Monoclonal Antibody 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#AMM85967). AMM85967 was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.