

Regulatory-associated protein of mTOR

Catalog No: #AP79135

Package Size: #AP79135-1 50ug #AP79135-2 100ug #AP79135-3 1mg

Orders: order@signalwayantibody.comSupport: tech@signalwayantibody.com

Description

Product Name	Regulatory-associated protein of mTOR
Brief Description	Recombinant Protein
Host Species	E.coli
Purification	Greater than 90% by SDS-PAGE
Species Reactivity	Human
Immunogen Description	504-661AA
Other Names	KIAA1303,RAPTOR,p150 target of rapamycin (TOR)-scaffold protein
Accession No.	Q8N122Gene name:RPTOR
Uniprot	Q8N122
GeneID	57521;
Calculated MW	17.38
Tag Info	His
Formulation	50mM NaH ₂ PO ₄ , 500mM NaCl Buffer with 500mM Imidazole,10%glycerol(PH8.0)
Storage	Store at -20C. (Avoid repeated freezing and thawing.)Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

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.

References

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Note: This product is for in vitro research use only