Anti-mTOR pS2448 (RABBIT) Antibody - 600-401-422

Code: 600-401-422 **Size:** 100 µg

Product Description: Anti-mTOR pS2448 (RABBIT) Antibody - 600-401-422

Concentration: 1.1mg/mL by UV absorbance at 280 nm

PhysicalState: Liquid (sterile filtered)

Label	Unconjugated
Host	Rabbit
Gene Name	FRAP1
Species Reactivity	human
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Stabilizer	None
Preservative	0.01% (w/v) Sodium Azide
Storage Condition	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Synonyms	FKBP12 rapamycin complex associated protein antibody, FLJ44809 antibody, FRAP antibody
Application Note	This affinity purified antibody has been tested for use in immunohistochemistry, ELISA and western blotting. Western blotting shows reactivity specific for phospho mTOR detecting a band at approximately 250 kDa. Reactivity in other immunoassays is unknown.
Background	Mammalian target of rapamycin (mTOR) is a serine and threonine protein kinase that regulates numerous cellular functions, in particular, the initiation of protein translation. Rapamycin is a natural product macrolide that induces G₁ growth arrest in yeast, Drosophila, and mammalian cells. mTOR has a long list of synonyms including FK506 binding protein12 - rapamycin associated protein 1, FK506 binding protein12 - rapamycin associated protein 2, FRAP1, FRAP2, RAFT1, RAPT1 and/or FKBP12-rapamycin associated protein (FRAP). mTOR is one of a family of proteins involved in cell cycle progression, DNA recombination, and DNA damage detection. In rat, mTOR is a 245-kD protein referred to as RAFT1 with significant homology to the Saccharomyces cerevisiae protein TOR1 and has been shown to associate with the immunophilin FKBP12 in a rapamycin-dependent fashion. The FKBP12-rapamycin complex is known to inhibit progression through the G₁ cell cycle stage by interfering with mitogenic signaling pathways involved in G₁ progression in several cell types, as well as in yeast. The binding of mTOR to FKBP12-rapamycin correlates with the ability of these ligands to inhibit cell cycle progression.
Purity And Specificity	This is an affinity purified antibody produced by immunoaffinity chromatography using the immunizing peptide after immobilization to a solid phase. Reactivity occurs with phosphorylated mTOR from human derived tissues and cells. Reactivity against mTOR from other species has not been determined, however, reactivity with mouse and rat is suggested based on protein sequence homologies.
Assay Dilutions	User Optimized
ELISA	1:10,000 - 1:100,000
Immunohistochemistry	5.0 µg/ml
WESTERN BLOT	1:500 - 1:2,000
IHC	5.0 µg/ml
OTHER ASSAYS	User Optimized
Expiration	Expiration date is one (1) year from date of opening.
Immunogen	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 2440-2457 of human mTOR.
General Reference	Kristof,A.S. et al. (2003) Stimulation of signal transducer and activator of transcription-1 (STAT1)-dependent gene transcription by lipopolysaccharide and interferon-gamma is regulated by mammalian target of rapamycin. J. Biol. Chem. 278 (36), 33637-33644. Chen,Y., et al. (2003) Phospholipase D confers rapamycin resistance in human breast cancer cells. Oncogene 22 (25), 3937-3942.

Nojima,H. et al. (2003) The mammalian target of rapamycin (mTOR) partner, raptor, binds the mTOR substrates p70 S6 kinase and 4E-BP1 through their TOR signaling (TOS) motif. J. Biol. Chem. 278 (18), 15461-15464.

Related Products

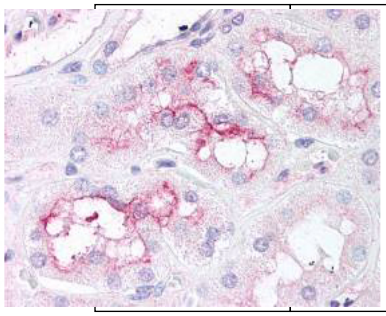
100-401-401	Anti-AKT (RABBIT) Antibody - 100-401-401
200-301-268	Anti-AKT pS473 (MOUSE) Monoclonal Antibody - 200-301-268
200-301-269	Anti-AKT pT308 (MOUSE) Monoclonal Antibody - 200-301-269
600-401-268	Anti-AKT pS473 (RABBIT) Antibody - 600-401-268

Related Links

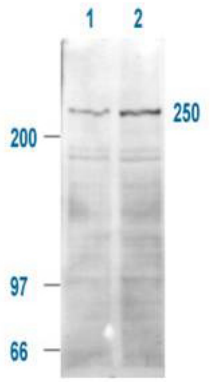
NCBI - 1169735	http://www.ncbi.nlm.nih.gov/protein/1169735
UniProtKB - P42345	http://www.uniprot.org/uniprot/P42345
GeneID - 2475	http://www.ncbi.nlm.nih.gov/gene/2475

Images

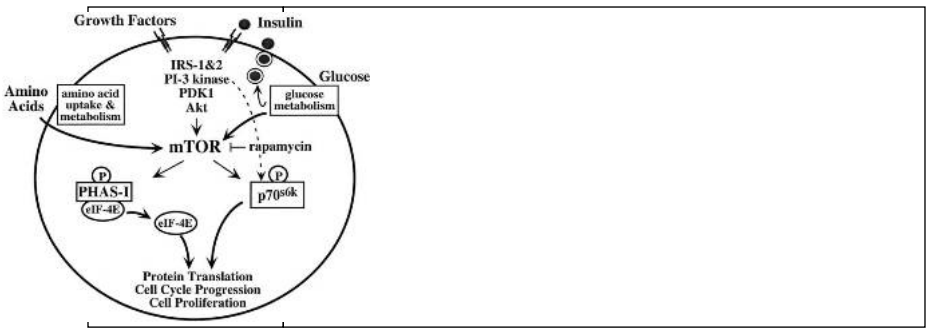
1 Rockland's affinity purified anti-mTOR pS 2448 antibody was used at 5 g/ml to detect signal in a variety of tissues including multi-human, multi-brain and multi-cancer slides. This image shows moderate staining of proximal convoluted tubules of the kidney. Tissue was formalin-fixed and paraffin embedded. The image shows localization of the antibody as the precipitated red signal, with a hematoxylin purple nuclear counterstain. Personal Communication, Tina Roush, LifeSpanBiosciences, Seattle, WA.



2 Affinity Purified Anti-mTOR pS 2448 (Rabbit) is shown to detect a 250 kDa band (indicated) corresponding to phosphorylated human mTOR present in a 293T whole cell lysates. Cells were serum-starved for 24 hours prior to harvest. ~20 ug of lysate was loaded per lane for SDS-PAGE. Untreated cells are shown in lane 1, whereas cells in lane 2 were treated with IGF-1 (100 ng/ml) for 20 min prior to harvest. Follow reaction of antibody with a 1:2000 dilution of HRP Goat-a-Rabbit IgG for visualization.



3 Metabolic and autocrine regulation of the mTOR pathway by Beta-cells.



Disclaimer

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