Anti-mTOR (RABBIT) Antibody - 600-401-897

Code: 600-401-897 **Size:** 100 µg

Product Description: Anti-mTOR (RABBIT) Antibody - 600-401-897

Concentration: 0.9 mg/ml by UV absorbance at 280 nm

PhysicalState: Liquid (sterile filtered)

Label	Unconjugated
Host	Rabbit
Gene Name	FRAP1
Species Reactivity	human, mouse, rat
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	FK506 binding protein12-rapamycin associated protein 2 antibody, FKBP rapamycin associated protein antibody, FKBP12 rapamycin complex associated protein antibody, FLJ44809 antibody, FRAP antibody
Application Note	This affinity purified antibody is suitable for use in ELISA and western blotting. ELISA data demonstrate reactivity against both phosphorylated and non-phosphorylated mTOR at S2448 and western blotting shows 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 both phosphorylated and non-phosphorylated forms of mTOR at S2448 from human derived tissues and cells. A BLAST analysis was used to suggest cross reactivity with mTOR protein from rat and mouse based on 100% homology with the immunizing sequence. Expect partial reactivity against mTOR homologues from zebrafish (94%) and dog (89%). Reactivity against homologues from other sources is not known.
Assay Dilutions	User Optimized
ELISA	1:50,000 - 1:100,000
WESTERN BLOT	1:250 - 1:2,000
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

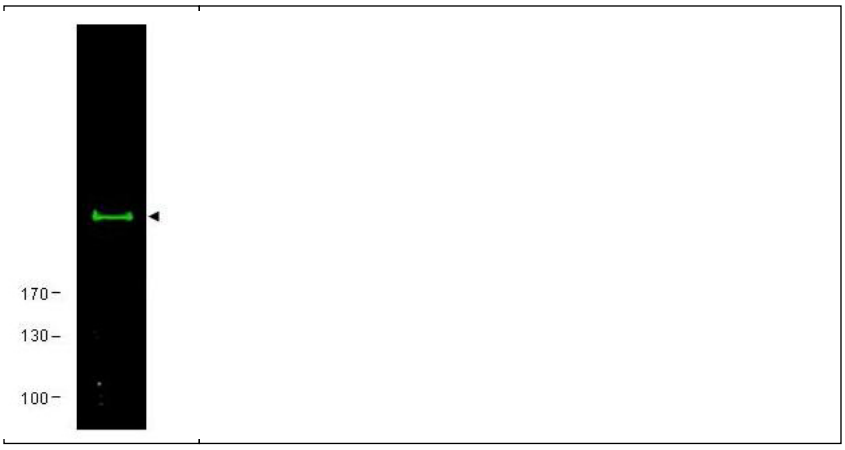
200-401-A58	Anti-FKBP8 (RABBIT) Antibody - 200-401-A58
600-401-422	Anti-mTOR pS2448 (RABBIT) Antibody - 600-401-422
600-401-934	Anti-eIF3f (RABBIT) Antibody - 600-401-934
611-143-002	Anti-RABBIT IgG (H&L) (GOAT) Antibody DyLight™ 649 Conjugated - 611-143-002

Related Links

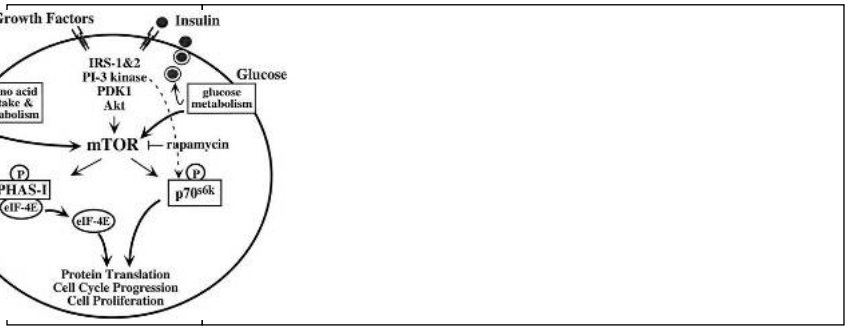
NCBI	http://www.ncbi.nlm.nih.gov/protein/1169735
UniProtKB	http://www.uniprot.org/uniprot/P42345
NCBI - 1169735	http://www.ncbi.nlm.nih.gov/protein/1169735
UniProt - P42345	http://www.uniprot.org/uniprot/P42345
Gene ID - 2475	http://www.ncbi.nlm.nih.gov/gene/2475

Images

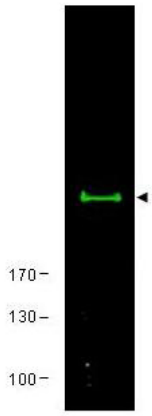
1 Western blot using Rockland's Affinity Purified anti-mTOR antibody shows detection of a band ~245 kDa corresponding to human mTor (arrowhead). Approximately 30 µg of HEK293 cell lysate was separated by 4-8% SDS-PAGE and transferred onto nitrocellulose. After blocking, the membrane was probed with the primary antibody diluted to 1:650 for 2h at RT. The membrane was washed and reacted with a 1:10,000 dilution of IRDye™800 conjugated Gt-a-Rabbit IgG [H&L] MX (611-132-122) for 45 min at room temperature. IRDye™800 fluorescence image was captured using the Odyssey® Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.



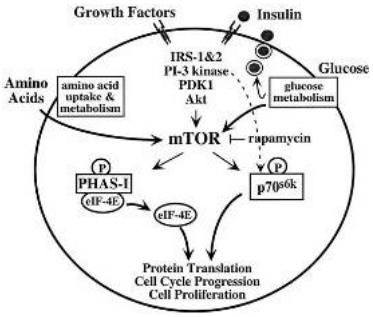
2



3	Western blot using Rockland's Affinity Purified anti-mTOR antibody shows detection of a band ~245 kDa corresponding to human mTor (arrowhead). Approximately 30 µg of HEK293 cell lysate was separated by 4-8% SDS-PAGE and transferred onto nitrocellulose. After blocking, the membrane was probed with the primary antibody diluted to 1:650 for 2h at RT. The membrane was washed and reacted with a 1:10,000 dilution of IRDye™800 conjugated Gt-a-Rabbit IgG [H&L] MX (611-132-122) for 45 min at room temperature. IRDye™800 fluorescence image was captured using the Odyssey® Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.



4	Metabolic and autocrine regulation of the mTOR pathway by b-cells.



Disclaimer

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