

Product datasheet for **R1472P**

MTOR pSer2448 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, IHC, WB
Recommended Dilution:	This antibody has been tested for use in Immunohistochemistry (5.0 µg/ml), ELISA (1/15,000-1/65,000) and Western blotting (1/500-1/2,000). Western blotting shows reactivity specific for phospho mTOR detecting a band at approximately 250 kDa.
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	A synthetic peptide corresponding to amino acids 2440-2457 of Human mTOR
Specificity:	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.
Formulation:	0.02M Potassium Phosphate, 0.15M Sodium Chloride, pH 7.2, containing 0.01% (w/v) Sodium Azide as preservative. State: Aff - Purified State: Liquid (sterile filtered) purified Ig fraction.
Concentration:	lot specific
Purification:	Immunoaffinity Chromatography using the immunizing peptide after immobilization to a solid phase.
Conjugation:	Unconjugated
Storage:	Store the antibody undiluted (in aliquots) at -20°C. Avoid repeated freezing and thawing. Dilute only prior to immediate use.
Stability:	Shelf life: one year from despatch.
Gene Name:	mechanistic target of rapamycin
Database Link:	Entrez Gene 2475 Human P42345



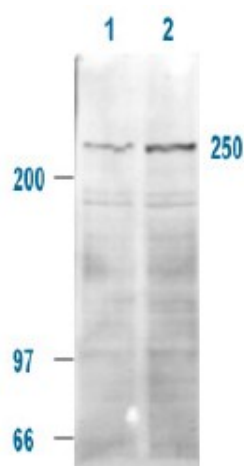
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Background:

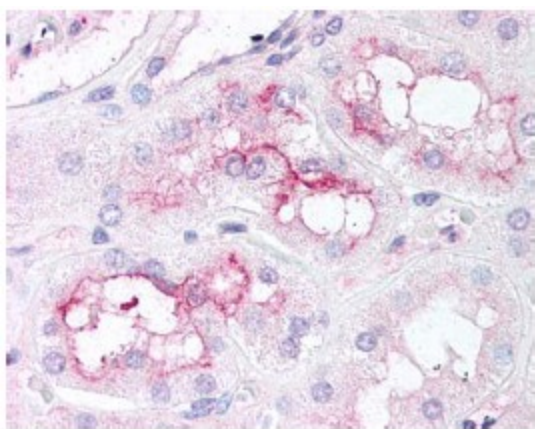
Mammalian target of rapamycin (mTOR) is a serine and threonine protein kinase that regulates numerous cellular functions, in particular, the initiation of protein translation. Rapamycin is a natural product macrolide that induces G1 growth arrest in yeast, *Drosophila*, and mammalian cells. mTOR is one 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.

Synonyms:

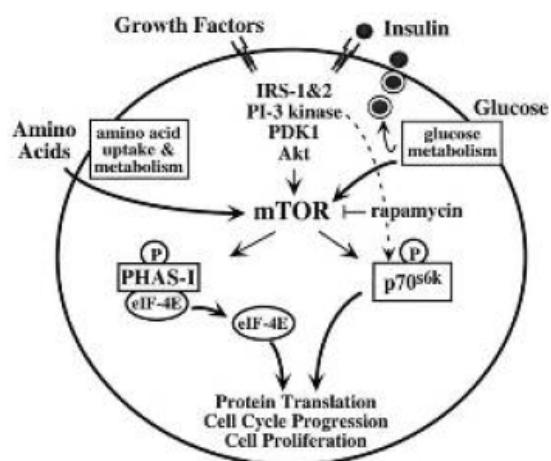
Mammalian target of rapamycin, TOR, FRAP, FRAP2, RAPT1

Product images:


Immunoblotting. mTOR antibody (pSer2448) is shown to detect a 250kDa band (indicated) corresponding to phosphorylated Human mTOR present in a 293T whole cell lysates. Cells were serumstarved for 24 hours prior to harvest. ~20ug 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 anti-Rabbit IgG for visualization.



Immunohistochemistry: pSer2448 mTOR antibody staining of Formalin-Fixed, Paraffin Embedded Sections. This antibody was used at 5 ug/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. The image shows localization of the antibody as the precipitated Red signal, with a hematoxylin purple nuclear counterstain. Personal Communication, Tina Roush, Seattle, WA.



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