

Product datasheet for **TA590835**

MTOR Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, IP
Recommended Dilution:	WB: 1:5000-1:20000; ELISA: 1:100-1:2000; IF/ICC 1:10-1:2000; IHC: 1:10-1:2000; IHC-P 1:250-1:2000
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	DNA immunization. This antibody is specific for the C Terminus Region of the target protein.
Formulation:	20 mM Potassium Phosphate, 150 mM Sodium Chloride, pH 7.0
Concentration:	1.01mg/ml
Purification:	Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	mechanistic target of rapamycin kinase
Database Link:	NP_004949 Entrez Gene 2475 Human P42345



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Background:

The mammalian target of rapamycin (mTOR) is a major effector of cell growth and proliferation via the regulation of protein synthesis. mTOR is composed of an N-term; 20 tandem repeats- HEAT which are implicated in protein-protein interactions and a C-term; which includes a FAT domain, a FBR domain, a kinase domain, a NDR domain and a FATC domain. The FATC domain is essential to mTOR activity and the deletion of a single amino acid from this domain abrogates the activity. mTOR can be auto-phosphorylated via its intrinsic serine/threonine kinase activity. mTOR regulates protein synthesis through the phosphorylation and inactivation of the repressor of mRNA translation 4E-BP1 and through the phosphorylation and activation of S6 kinase. RAPTOR (regulatory associated protein of TOR) is a positive regulator of TOR. Other known mediators of mTOR include PI3-K and ATK from the insulin pathway.

Synonyms:

FRAP; FRAP1; FRAP2; RAFT1; RAPT1; SKS

Note:

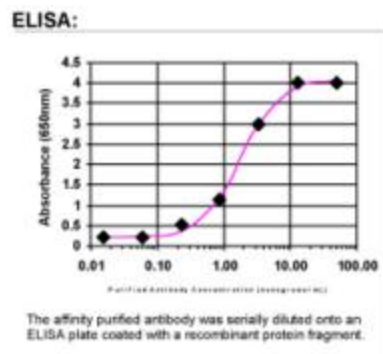
This antibody was generated by SDIX's Genomic Antibody Technology® (GAT). [Learn about GAT](#)

Protein Families:

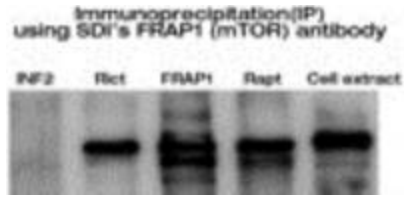
Druggable Genome, Protein Kinase

Protein Pathways:

Acute myeloid leukemia, Adipocytokine signaling pathway, ErbB signaling pathway, Glioma, Insulin signaling pathway, mTOR signaling pathway, Pathways in cancer, Prostate cancer, Type II diabetes mellitus

Product images:

ELISA: mTOR Antibody



Immunoprecipitation: mTOR Antibody - Several commercially available antibodies which were generated using short peptides failed to isolate the FRAP1 protein complexes. SDI's FRAP1 (mTOR) antibody, 2813.00.02, was generated using in vivo expressed immunogen of 100 amino acids. It was used to pull down protein complexes through immunoprecipitation. It demonstrated that Rictor and Raptor formed the distinct complexes with FRAP (mTOR). The immunoprecipitation conditions were described in Sarbassov et al (Phosphorylation and regulation of Akt/PKB by the Rictor-mTOR complex, *Science* 307:1098-1101, 2005, supporting online material, material and methods). FRAP1 was detected in Western blot using FRAP1 antibody at 1:4000 dilution. The experiments were performed using MDA MB-435 human cancer cell line and NF2 was used as control.