

## Product datasheet for **TA300537**

### MTOR Rabbit Monoclonal Antibody [Clone ID: Y391]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	Y391
Applications:	FC, IF, IHC, WB
Recommended Dilution:	IHC-P: Use at an assay dependent dilution; WB: 1:1000 - 1:2000; ICC/IF: 1:50 - 1:100; FC: 1:50 - 1:80; IP: 1:50
Reactivity:	Mouse, Rat, Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Monoclonal
Immunogen:	A synthetic peptide corresponding to residues near the C-term of PI3K/PI4K domain of human mTOR/FRAP was used as an immunogen
Formulation:	PBS 49%,Sodium azide 0.01%,Glycerol 50%,BSA 0.05%
Purification:	Tissue culture supernatant
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	289 kDa
Gene Name:	mechanistic target of rapamycin
Database Link:	<a href="#">NP_004949</a> <a href="#">Entrez Gene 56717 Mouse</a> <a href="#">Entrez Gene 56718 Rat</a> <a href="#">Entrez Gene 2475 Human</a> <a href="#">P42345</a>



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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:**

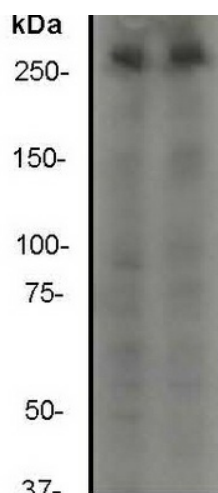
FRAP; FRAP1; FRAP2; RAFT1; RAPT1; SKS

**Protein Families:**

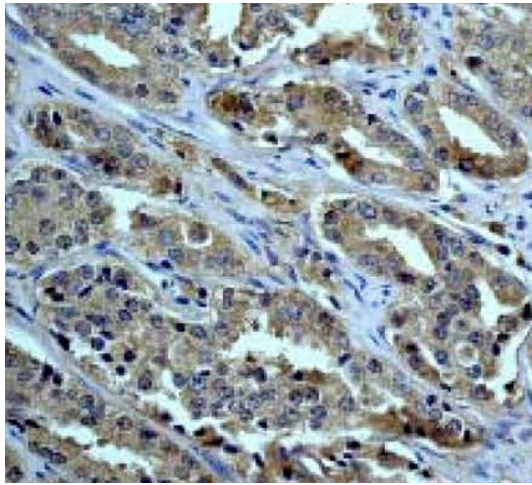
Druggable Genome, Protein Kinase

**Protein Pathways:**

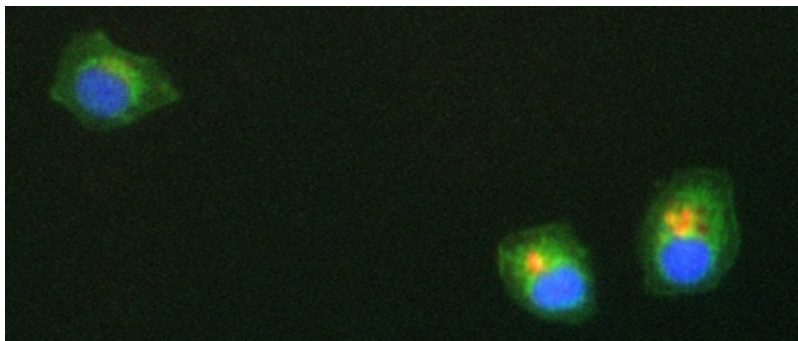
Acute myeloid leukemia, Adipocytokine signaling pathway, ErbB signaling pathway, Glioma, Insulin signaling pathway, mTOR signaling pathway, Pathways in cancer, Prostate cancer, Type II diabetes mellitus

**Product images:**

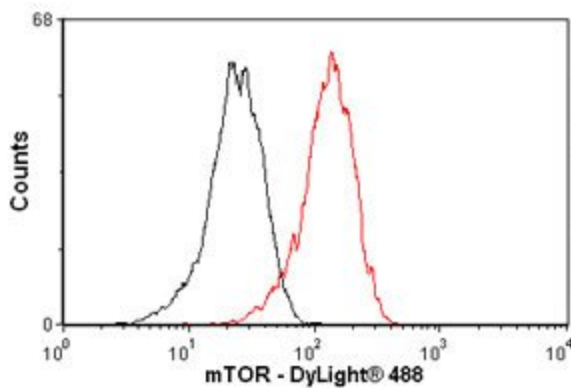
Western blot - mTOR antibody [Y391]; All lanes : Anti-mTOR antibody [Y391] - ChIP Grade at 1/2000 dilution. Lane 1 : Hela cell lysate. Lane 2 : MCF-7. Predicted band size : 289 kDa. Observed band size : >250 kDa.



Immunohistochemistry (Paraffin-embedded sections) - mTOR antibody [Y391]; Immunohistochemical analysis of mTOR expression in paraffin-embedded human prostate carcinoma, using 1/250 TA300537.



ICC/IF image of TA300537 stained MCF7 cells. The cells were incubated with the antibody overnight at 4. The secondary antibody (green) was Alexa Fluor 488 goat anti-rabbit IgG (H+L) used at 1:1000 for 1h. Alexa Fluor 594 WGA was used to label plasma membranes (red) at 1:200 for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43uM.



Flow Cytometry-mTOR antibody- ChIP Grade (TA300537); Overlay histogram showing HeLa cells stained with TA300537 (red line). The secondary antibody used was DyLight 488 goat anti-rabbit IgG (H+L) at 1:500. Isotype control antibody (black line) was rabbit monoclonal IgG (1ug/1x10<sup>6</sup> cells) used under the same conditions. This antibody gave a significantly decreased signal in HeLa cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween used under the same conditions.