**mTOR (7C10)**

**Rabbit mAb**

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**Applications**

- Western
- IHC-P
- IF-IC
- F

**Species Cross-Reactivity**

- H, M, R, Mk, (Hr)

**Molecular Wt.**

289 kDa

**Isootype**

Rabbit IgG**

**Recommended Antibody Dilutions**

- Western blotting: 1:1000
- Immunohistochemistry (Paraffin): 1:100
- Unmasking buffer: Citrate
- Antibody diluent: TBST-5%NGS
- Antigen retrieval: SignalStain® Antibody Diluent #8112
- Immunofluorescence (IF-IC): 1:400
- Flow Cytometry: 1:800

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**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

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**Background:** The mammalian target of rapamycin (mTOR, FRAP, RAFT) is a Ser/Thr protein kinase (1-3) that functions as an ATP and amino acid sensor to balance nutrient availability and cell growth (4,5). When sufficient nutrients are available, mTOR responds to a phosphatidic acid-mediated signal to transmit a positive signal to p70 S6 kinase and participate in the inactivation of the eIF4E inhibitor, 4E-BP1 (6). These events result in the translation of specific mRNA subpopulations. mTOR plays a key role in cell growth and homeostasis and may be abnormally regulated in tumors. For these reasons, mTOR is currently under investigation as a potential target for anti-cancer therapy (9).

**Specificity/Sensitivity:** mTOR (7C10) Rabbit mAb detects endogenous levels of total mTOR protein.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser2481 of human mTOR.

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**Applications Key:**

- W—Western
- IP—Immunoprecipitation
- IHC—Immunohistochemistry
- CIP—Chromatin Immunoprecipitation
- IF—Immunofluorescence
- F—Flow cytometry
- E-P—ELISA-Peptide

**Species Cross-Reactivity Key:**

- H—human
- M—mouse
- R—rat
- Hm—hamster
- Mk—monkey
- Mi—mink
- C—chicken
- Dm—D. melanogaster
- X—Xenopus
- Z—zebrafish
- B—bovine
- Dg—dog
- Pg—pig
- Sc—S. cerevisiae
- Ce—C. elegans
- Hr—horse
- All—all species expected

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**Important:** For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

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**Entrez-Gene ID #2475**

**UniProt ID #Q13131**

**U.S. Patent No. 5,675,063**

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Immunohistochemical analysis of paraffin-embedded human lung carcinoma, using mTOR (7C10) Rabbit mAb in the presence of control peptide (left) or mTOR Blocking Peptide #1072 (right).

Flow cytometric analysis of 293 cells, using mTOR (7C10) Rabbit mAb (blue) compared to a nonspecific negative control antibody (red).