

#2976 Store at **-20°C**

Phospho-mTOR (Ser2448) (49F9) Rabbit mAb (IHC Specific)

- Small 100 μ l (50 sections)
- Large 300 μ l (150 sections)

rev. 01/11/10

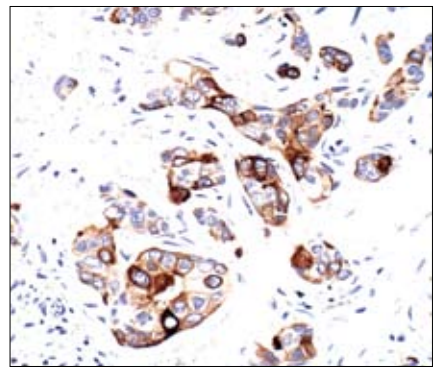


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Applications	Species Cross-Reactivity	Molecular Wt.	Isotype
IHC-P, IHC-F Endogenous	H, (M, R)	289 kDa	Rabbit IgG*

Background: The mammalian target of rapamycin, mTOR, also known as FRAP or RAFT (1-3), is a Ser/Thr protein kinase. mTOR acts as a sensor for ATP and amino acids, balancing the availability of nutrients and cell growth (4,5). When sufficient nutrients are available, mTOR responds to a phosphatidic acid-mediated signal (6), transmits a positive signal to p70 S6 kinase and participates in the inactivation of the eIF4E inhibitor, 4E-BP1. These events result in the translation of specific mRNA subpopulations. mTOR is phosphorylated at Ser2448 via the PI3 kinase/Akt signaling pathway and autophosphorylated at Ser2481 (7,8). mTOR plays a key role in cellular growth and homeostasis and its regulation is frequently altered in tumors. For these reasons, mTOR is currently under investigation as a potential target for anti-cancer therapy (9).



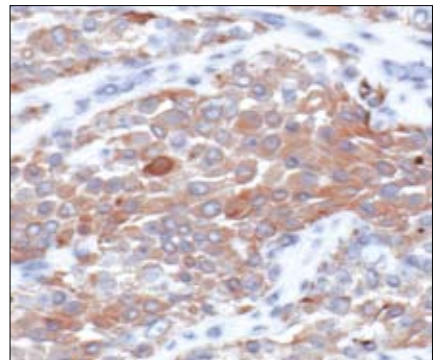
Immunohistochemical analysis of paraffin-embedded human breast carcinoma, using Phospho-mTOR (Ser2448) (49F9) Rabbit mAb (IHC Specific).

Specificity/Sensitivity: Phospho-mTOR (Ser2448) (49F9) Rabbit mAb detects endogenous levels of mTOR protein only when phosphorylated at Ser2448.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser2448 of human mTOR.

Background References:

- (1) Sabers, C.J. et al. (1995) *J. Biol. Chem.* 270, 815–822.
- (2) Brown, E.J. et al. (1994) *Nature* 369, 756–758.
- (3) Sabatini, D.M. et al. (1994) *Cell* 78, 35–43.
- (4) Gingras, A.C. et al. (2001) *Genes Dev.* 15, 807–826.
- (5) Dennis, P.B. et al. (2001) *Science* 294, 1102–1105.
- (6) Fang, Y. et al. (2001) *Science* 294, 1942–1945.
- (7) Navé, B.T. et al. (1999) *Biochem. J.* 344 Pt 2, 427–431.
- (8) Peterson, R.T. et al. (2000) *J. Biol. Chem.* 275, 7416–7423.
- (9) Huang, S. and Houghton, P.J. (2003) *Curr. Opin. Pharmacol.* 3, 371–377.



Immunohistochemical analysis of frozen H1650 xenograft, showing cytoplasmic localization, using Phospho-mTOR (Ser2448) (49F9) Rabbit mAb (IHC specific).

Entrez-Gene ID #2475
Swiss-Prot Acc. #P42345

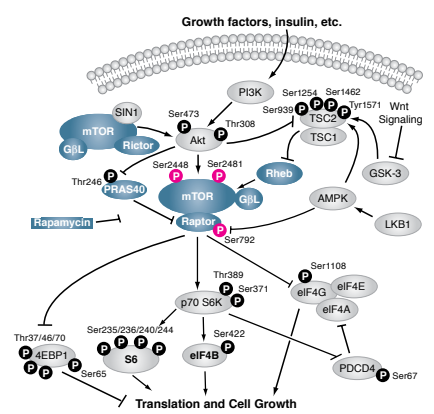
Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C . Do not aliquot the antibody.

*** Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Immunohistochemistry (Paraffin)	1:100
Unmasking buffer:	Citrate
Antibody diluent:	TBST-5% NGS
Immunohistochemistry (Frozen)	1:100
Fixative	Acetone

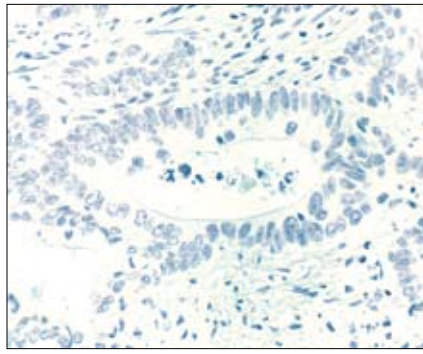
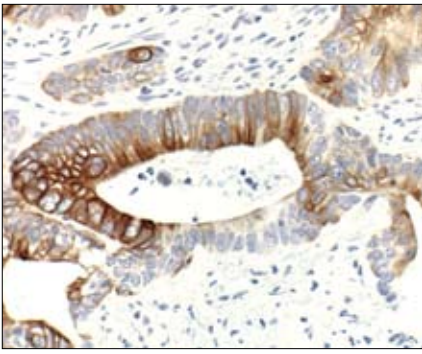
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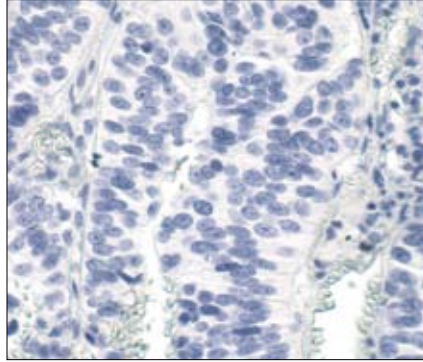
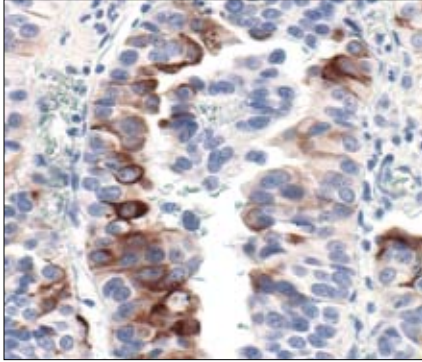
IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—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 Species enclosed in parentheses are predicted to react based on 100% homology.

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Immunohistochemical analysis of paraffin-embedded human colon carcinoma untreated (left) or λ phosphatase-treated (right), using Phospho-mTOR (Ser2448) (49F9) Rabbit mAb (IHC Specific).



Immunohistochemical analysis of paraffin-embedded human transitional epithelial carcinoma of the bladder using Phospho-mTOR (Ser2448) (49F9) Rabbit mAb (IHC Specific) in the presence of control peptide (left) or Phospho-mTOR (Ser 2448) Blocking Peptide #1230 (right).