

Cat. No:	MAB-94141
Conjugate:	Unconjugated
Size:	100 ug
Clone:	D9C2
Concentration:	1mg/ml
Host:	Rb
Isotype:	IgG
Reactivity:	Hu, Ms, Rt
Applications:	Western blotting 1:1000 Immunohistochemistry 1:100 Immunofluorescence (IF-IC) 1:200
Molecular Weight:	290 kDa
Purification:	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser2448 of human mTOR protein.
Background:	<p>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 is phosphorylated at Ser2448 via the PI3 kinase/Akt signaling pathway and autophosphorylated at Ser2481 (7,8). 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). Phospho-mTOR (Ser2448) (D9C2) XP® RabbitmAb detects endogenous levels of mTOR protein only when phosphorylated at Ser2448.</p>
Form:	liquid
Buffer:	Supplied in PBS containing 50% glycerol ,0.5% BSA and 0.2% sodium Azide
Storage:	Store at -20°C. Do not aliquot the antibody.

References

(1) Sabers, C.J. et al. (1995) J Biol Chem 270, (2) Brown, E.J. et al. (1994) Nature 369, 756-8. (3) Sabatini, D.M. et al. (1994) Cell 78, 35-43. (4) Gingras, A.C. et al. (2001) Genes Dev 15, 807- (5) Dennis, P.B. et al. (2001) Science 294, 1102-5. (6) Fang, Y. et al. (2001) Science 294, 1942-5. (7) Navé, B.T. et al. (1999) Biochem J 344 Pt 2, 427-31. (8) Peterson, R.T. et al. (2000) J Biol Chem 275, 7416-23.

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