

# Phospho-mTOR (Ser2448) Blocking Peptide

✓ 100 µg  
(100 sections)



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**For Research Use Only. Not For Use In Diagnostic Procedures.**

**Description:** This peptide is used to specifically block #2971 Phospho-mTOR (Ser2448) Antibody reactivity.

**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 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).

**Quality Control:** The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide detects #2971 Phospho-mTOR (Ser2448) Antibody in peptide dot blot.

**Directions for Use:** Use as a blocking reagent to evaluate the specificity of antibody reactivity in peptide dot blot protocols.

## Background References:

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- (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.

Entrez-Gene ID #2475

UniProt ID #P42345

**Storage:** Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA, 5% glycerol and 1% DMSO. Store at -20°C.

**For product specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).**

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