



## AKT1 Polyclonal Antibody

E90380

**Catalog Number:** E90380

**Amount:** 100ul, 100ug/100ul

**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).

**Calculated MW:** 289kDa

**Form of Antibody:** Rabbit IgG in PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

**Storage/Stability:** Store at -20oC or -80oC. Avoid freeze / thaw cycles.

**Immunogen:** A synthetic peptide of human mTOR

**Gene ID:** 2475

**Synonyms:** FLJ44809; FRAP; FRAP2; MTOR; RAFT1; RAPT1;

**Purification:** Affinity purification

**Reactivity:** Human, Mouse, Rat

**Applications:** WB IHC

**Swiss-Prot No. :** P42345

- References:**
1. Sabers, C.J. et al. (1995) J Biol Chem 270, 815-22.
  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, 807-26.
  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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