Phospho-Akt (Ser473) (587F11) Mouse mAb

**Applications:** WB, IP

**Reactivity:** H, M, R, Hm

**Sensitivity:** Endogenous

**MW (kDa):** 60

**Source/Isoform:** Mouse IgG2b

**UniProt ID:** P31749, P31751, Q9Y243

**Entrz-Gene ID:** 207, 208, 10000

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

**Product Usage Information**

**Application** | **Dilution**
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Western Blotting | 1:1000
Immunoprecipitation | 1:200

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 10% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

**Specificity / Sensitivity**

Phospho-Akt (Ser473) (587F11) Mouse mAb detects endogenous levels of Akt only when phosphorylated at serine 473. This antibody does not detect Akt phosphorylated at other sites or related kinases such as PKC and p70 S6 kinase.

**Species Reactivity:**

Human, Mouse, Rat, Hamster, Chicken

**Species predicted to react based on 100% sequence homology:**

Monkey

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues around Ser473 of mouse Akt.

**Background**

Akt, also referred to as PKB or Rac, plays a critical role in controlling survival and apoptosis (1-3). This protein kinase is activated by insulin and various growth and survival factors to function in a wortmannin-sensitive pathway involving PI3 kinase (2,3). Akt is involved in cell cycle regulation by preventing GSK-3β-mediated phosphorylation and inactivation of GSK-3β (4) and by phosphorylation within the carboxy terminus at Ser473. The previously elusive Akt promotes cell survival by inhibiting apoptosis through phosphorylation and inactivation of several targets, including Bad (7), forkhead transcription factors (8), c-Raf (9), and mTOR within the mTOR-raptor complex (18). Akt also plays a critical role in cell growth by directly phosphorylating mTOR in a rapamycin-sensitive complex containing raptor (17). More importantly, Akt phosphorylates and inactivates tuberin (TSC2), an inhibitor of mTOR within the mTOR-raptor complex (18,19).

**APPLICATIONS KEY**

**WB**: Western Blot | **IP**: Immunoprecipitation | **IH**: Immunohistochemistry | **ChIP**: Chromatin Immunoprecipitation | **F**: Flow Cytometry | **EP**: ELISA-Peptide

**CROSS-REACTIVITY**


**IMPORTANT:** For primary antibodies recommended for western blotting applications, we recommend incubating the membrane with diluted antibody at 4°C with gentle shaking overnight. Please refer to the western blot protocol found on the product web page for the antibody-specific diluent recommendation.