Phospho-EphA2 (Ser897) (D9A1) Rabbit mAb

**Applications**

- Western
- Immunoprecipitation
- IHC—Paraffin

**Species Cross-Reactivity**

- H, M, (R)

**Molecular Wt.**

- 125 kDa

**Isotype**

- Rabbit IgG**

**Background**

The Eph receptors are the largest known family of receptor tyrosine kinases (RTKs). They can be divided into two groups based on sequence similarity and on their preference for a subset of ligands: EphA receptors bind to a glycosylphosphatidylinositol-anchored ephrin A ligand; EphB receptors bind to ephrin B proteins that have a transmembrane and cytoplasmic domain (1,2). Research studies have shown that Eph receptors and ligands may be involved in many diseases including cancer (3). Both ephrin A and B ligands have dual functions. As RTK ligands, ephrins stimulate the kinase activity of Eph receptors and activate signaling pathways in receptor-expressing cells. The EphA extracellular domain is sufficient for this function as long as it is clustered (4). The second function of ephrins has been described as “reverse signaling”, whereby the cytoplasmic domain becomes tyrosine phosphorylated, allowing interactions with other proteins that may activate signaling pathways in the ligand-expressing cells (5). Various stimuli can induce tyrosine phosphorylation of ephrin B, including binding to EphB receptors, activation of Src kinase, and stimulation by PDE4 and FGFR (6). Tyr324 and Tyr327 have been identified as major phosphorylation sites of ephrin B1 in vivo (7).

It has been demonstrated that ligand-independent promotion of cell migration by EphA2 overexpression requires phosphorylation of EphA2 at Ser897 by Akt. On the other hand, stimulation of EphA2 by its ligand Ephrin-A1 negates Akt activation by growth factors and causes EphA2 dephosphorylation at Ser897 (8).

**Specificity/Sensitivity**

Phospho-EphA2 (Ser897) (D9A1) Rabbit mAb recognizes endogenous levels of EphA2 protein only when phosphorylated at Ser897.

**Source/Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser897 of human EphA2 protein.

**Western blot analysis of extracts from SNB19 cells, serum starved overnight and left untreated (−) or treated with FBS (10%, +), using Phospho-EphA2 (Ser897) (D9A1) Rabbit mAb (upper) or EphA2 (D4A2) XP® Rabbit mAb #6997 (lower).**

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

**Recommended Antibody Dilutions**

- Western blotting: 1:1000
- Immunoprecipitation: 1:100
- Immunohistochemistry (Paraffin): 1:8000†

**Storage:**

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

**Recommended Antibody Dilutions**

For product specific protocols please see the web page for this product at www.cellsignal.com.

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**Background References:**


**Entrez-Gene ID**

#1969

**Swiss-Prot Acc.**

#P29317

**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.
Immunohistochemical analysis of paraffin-embedded SNB19 cell pellets, control (left) or 10% FBS-treated (right), using Phospho-EphA2 (Ser897) (D9A1) Rabbit mAb.

Immunohistochemical analysis of paraffin-embedded human ovarian carcinoma, control (left) or λ phosphatase-treated (right), using Phospho-EphA2 (Ser897) (D9A1) Rabbit mAb.