EphA2 Antibody

Applications:
- WB

Reactivity:
- H

Sensitivity:
- Endogenous

MW (kDa):
- 135

Source:
- Rabbit

UniProt ID:
- #P29317

Entrez-Gene Id:
- 1969

Product Usage Information

Application
- Western Blotting

Dilution
- 1:1000

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

Specificity / Sensitivity
- EphA2 Antibody detects endogenous levels of total EphA2 protein. It does not cross-react with other related proteins.

Source / Purification
- Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr930 of human EphA2. Antibodies are purified by protein A and peptide affinity chromatography.

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 ephrin 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 PDGF and FGF (6). Tyr324 and Tyr327 have been identified as major phosphorylation sites of ephrin B1 in vivo (7).

EphA2 is overexpressed in various tumor cells and it has been suggested that EphA2 may promote malignancy. However, several studies demonstrate that EphA2 plays an important role in tumor suppression (8). The role of EphA2 in tumor development may depend upon regulation of its tyrosine kinase activity.

Background References

Species Reactivity
- Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer
- IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key
- WB: Western Blotting

Cross-Reactivity Key
Limited Uses

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