Revision 1

#3481 Store at -20C

Phospho-Ephrin B (Tyr324/329) Antibody

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H	Transfected Only	59	Rabbit	#P98172, #Q15768, #P52799	1947, 1949, 1948

Product Usage Information

Application	Dilution
Western Blotting	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

Phospho-Ephrin B (Tyr324/329) Antibody detects transfected levels of ephrin B protein only when phosphorylated at tyrosines 324/329. The antibody cross-reacts with ephrins B1, B2 and B3 but does not cross-react with other tyrosine-phosphorylated proteins.

Species predicted to react based on 100% sequence homology:

Mouse, Rat

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr324/329 of human ephrin B1. 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).

Background References

1. Wilkinson, D.G. (2000) *Int Rev Cytol* 196, 177-244.
2. Klein, R. (2001) *Curr Opin Cell Biol* 13, 196-203.
3. Dodelet, V.C. and Pasquale, E.B. (2000) *Oncogene* 19, 5614-9.
4. Holder, N. and Klein, R. (1999) *Development* 126, 2033-44.
5. Brückner, K. et al. (1997) *Science* 275, 1640-3.
6. Palmer, A. et al. (2002) *Mol Cell* 9, 725-37.
7. Kalo, M.S. et al. (2001) *J Biol Chem* 276, 38940-8.

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

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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Limited Uses