Anti-Phospho-Tyr^{331} EphrinB

Catalog Number: SY-p1110-331 **Size:** 100 µl $375.00

Product Description: Affinity purified rabbit polyclonal antibody

Applications: **WB**: 1:1000

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Tyr^{331} of chicken EphrinB. Note: Chicken Tyr^{331} is the homolog of mouse and rat Tyr^{343}, human Tyr^{344} and also *Xenopus* Tyr^{324}.

Species reactivity: The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with bovine, chicken, human, mouse, *Xenopus* and zebra fish based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Biological Significance: EphrinB proteins are thought to play key roles in cellular functions as diverse as neuronal migration and blood vessel development (Flanagan and Vanderhaeghen, 1998; Dufour et al., 2003; Oike et al., 2002). EphrinB molecules expressed at the membrane surface bind to the EphB family receptors on target cells during cell-to cell contact. This interaction leads to cell signaling in the target cell but also generates a reverse signal in the cell expressing EphrinB on its surface. This reverse signaling event is thought to be critical for vessel maturation and neuronal development. Importantly, tyrosine phosphorylation of EphrinB is thought to be a critical component of this reverse signaling event (Palmer et al., 2002). Recent work demonstrated that Tyr^{331} of EphrinB was phosphorylated in HEK293 cells after stimulation by the soluble EphB2 receptor tyrosine kinase (Kalo et al., 2001).

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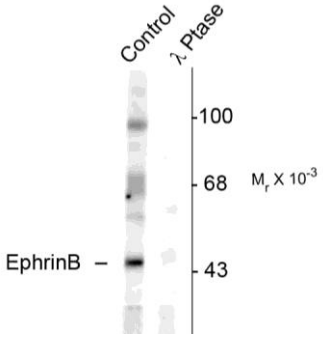

Western blot of rat testes lysate showing specific immunolabeling of the ~46k EphrinB phosphorylated at Tyr^{331} (Control). The phosphospecificity of this labeling is shown in the second lane (*lambda*-phosphatase: λ-Ptase). The blot is identical to the control except that it was incubated in λ-Ptase (1200 units for 30 min) before being exposed to the Anti-Tyr^{331} EphrinB. The immunolabeling is completely eliminated by treatment with λ-Ptase.

Purification Method: Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity: Specific for the ~46k EphrinB protein phosphorylated at Tyr^{331}. Immunolabeling is blocked by λ-phosphatase treatment.

WB = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation
Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.
Storage and Stability: Store at –20°C; stable for at least one year.
Shipment: Domestic - Blue Ice; International - Dry Ice.

Quality Control Tests: Western blots performed on each lot.

References:

Bong, Y.S., Park, Y.H., Lee, H.S., Mood, K., Ishimura, A. and Daar, I.O. Tyr-298 in ephrinB1 is critical for an interaction with the Grb4 adaptor protein, Biochem. J. 377:499-507 (2004).

Dufour, A., Seibt, J., Passante, L., Depaepe, V., Ciossek, T., Frisen, J., Kullander, K., Flanagan, J.G., Polleux, F. and Vanderhaeghen, P. Area specificity and topography of thalamocortical projections are controlled by ephrin/Eph genes, Neuron 39:453-465 (2003).

Flanagan, J.G. and Vanderhaeghen, P. The ephrins and Eph receptors in neural development, Annu. Rev. Neurosci. 21:309-345 (1998).

Oike, Y., Ito, Y., Hamada, K., Zhang, X.Q., Miyata, K., Arai, F., Inada, T., Araki, K., Nakagata, N., Takeya, M., Kisanuki, Y.Y., Yanagisawa, M., Gale, N.W. and Suda, T, Regulation of vasculogenesis and angiogenesis by EphB/ephrin-B2 signaling between endothelial cells and surrounding mesenchymal cells, Blood 100:1326-1333 (2002).

Palmer, A., Zimmer, M., Erdmann, K.S., Eulenburg, V., Porthin, A., Heumann, R., Deutsch, U. and Klein, R Ephrin B phosphorylation and reverse signaling: regulation by Src kinases and PTP-BL Phosphatase, Mol Cell 9:725-737 (2002).

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