

phospho-EphA4 (Tyr-779) Peptide

Cat. # EX2755

Size 50 µg

Background:

The Eph family of Receptor tyrosine kinases and their Ephrin ligands are important for cell positioning and morphogenesis during development. Eph receptors are classified into 10 EphA and 6 EphB receptors, which preferentially bind to the type A and type B ephrins, respectively. The EphA4 receptor can inhibit axon outgrowth and has roles in regulating axon projections during neural development. EphA4 signaling pathways require its kinase activity and involve binding and activation of Rho-GTPase guanine nucleotide-exchange factors (GEFs). EphA4 activation leads autophosphorylation of Tyr-596 and Tyr-602, and the conserved sites in EphA2 are required for binding to the GEFs, Vav2 and Vav3, and ephrin-induced cell migration. The Tyr-779 site in the kinase domain is also phosphorylated *in vivo* and may regulate kinase activity. Activated EphA4 leads to Src kinase phosphorylation of the GEF, ephexin-1, and this activates RhoA. Thus, EphA4 signaling involves complex tyrosine phosphorylation in its cytoplasmic region along with interaction with several GEFs.

References

Fang, W.B. et al. (2008) J. Biol. Chem. 283(23):16017.
Lackmann, M. & Boyd, A.W. (2008). Sci. Signal. 1(15):re2.
Binns, K.L. et al. (2000) Mol. Cell. Biol. 20(13):4791.

Peptide Sequence:

Phospho-EphA4 (Tyr-779) synthetic peptide corresponding to amino acids surrounding tyrosine 779 in human EphA4. This sequence has significant homology to the conserved site in rat and mouse EphA4, and is conserved well in most other EphA family members, but has less conservation in EphB family members.

Buffer and Storage:

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide.
Store at -20°C. Stable for 1 year.

Applications:

WB 1:1000
ELISA 50 ng/well

End user should determine optimal concentration dependent on the concentration of the antibody.
Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.
ELISA established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

Specificity:

This peptide is specifically recognized by EphA4 (Tyr-779) phospho-specific antibody (EP2751) in ELISA, and has been shown to block the reactivity of EP2751 in Western blot and is recommended for blocking in immunocytochemistry.

Related Products:

EP2751 EphA4 (Tyr-779), phospho-specific [Conserved site] Rabbit
EP2711 EphA4 (C-terminal region) Rabbit Polyclonal
EM2801 EphA4 (N-terminal region) Mouse Monoclonal
EP2731 EphA4 (Tyr-602), phospho-specific [Conserved site] Rabbit
EP2821 Ephexin-1 (C-terminal region) Rabbit Polyclonal
EP2841 Ephexin-1 (Tyr-87), phospho-specific Rabbit Polyclonal

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Rev 12/18/2008