EphA4 (Tyr-602), phospho-specific
[Conserved site]

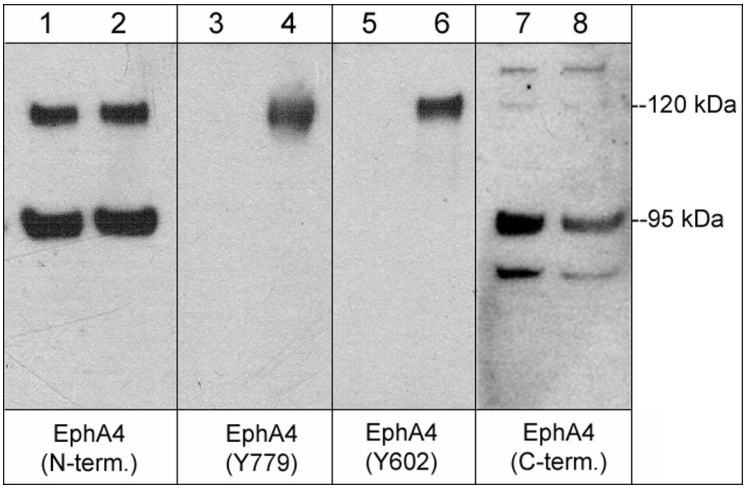
Cat. #	EP2731
Host	Rabbit Polyclonal
Size	100 µl

Background:

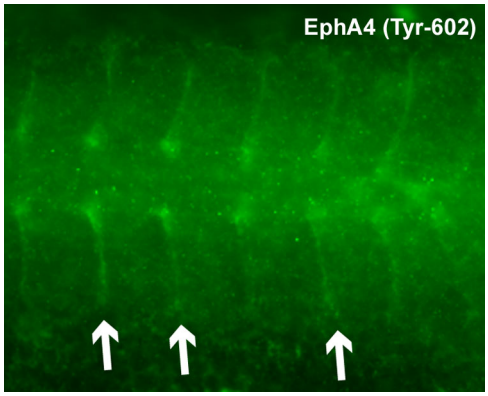
The Eph family of Receptor tyrosine kinases and their Ephrin ligands are important for cell positioning and morphogenesis during development. Eph receptors are classified into 10 EphA and 6 EphB receptors, which preferentially bind to the type A and type B ephrins, respectively. The EphA4 receptor can 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.
Julich, D. et al. (2009) Development 136:2913. (IHC: zebrafish embryos)



Western blot analysis of human umbilical vein endothelial cells untreated (lanes 1, 3, 5, & 7) or treated with pervanadate (1 mM) for 30 min. (lanes 2, 4, 6, & 8). The blot was probed with anti-EphA4 (N-terminal region) (lanes 1 & 2), anti-EphA4 (Tyr -779) (lanes 3 & 4), anti-EphA4 (Tyr-602) (lanes 5 & 6), or anti-EphA4 (C-terminal region) (lanes 7 & 8).



Paraformaldehyde-fixed zebrafish embryos were probed with anti-EphA4 (Tyr-602) (EP2731) then detected using Alexa Fluor 647 goat anti-rabbit. Arrows show labeling of somite boundaries and the notochord. (Image provided by Dr. Scott Holley at the Department of Molecular, Cellular and Developmental Biology, Yale University.

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[Conserved site]

Cat. #	EP2731
Host	Rabbit Polyclonal
Size	100 µl

Immunogen:

EphA4 (Tyr-602) synthetic peptide (coupled to carrier protein) corresponds to amino acids surrounding phosphorylated tyrosine 602 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 and EphB family members.

Buffer and Storage:

Rabbit polyclonal, affinity-purified antibody is supplied in 100 µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Do not aliquot. Stable for 1 year.

Applications:

WB	1:1000
ELISA	1:2000
IHC	1:100

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1hour at room temperature.

Specificity:

This antibody was cross-adsorbed to unrelated phosphotyrosine peptides before affinity purification using EphA4 (Tyr-602) peptide. The purified antibody detects a 120 kDa* band corresponding to EphA4 in Western blots of HUVEC cells treated with pervanadate and in mouse brain tissue.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Related Products:

EP2711 EphA4 (C-terminal region) Rabbit Polyclonal
EM2801 EphA4 (N-terminal region) Mouse Monoclonal
EP2751 EphA4 (Tyr-779), phospho-specific [Conserved site] Rabbit
EP2821 Ephexin-1 (C-terminal region) Rabbit Polyclonal
EP2841 Ephexin-1 (Tyr-87), phospho-specific Rabbit Polyclonal
EX2735 phospho-EphA4 (Tyr-602) Peptide

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