

# EphA4 Receptor Activation Antibody Sampler Kit

Catalog # EK6220

## Kit Summary:

The EphA4 activation antibody sampler kit can be used to detect EphA4 phosphorylation of Tyr-602 and Tyr-779. The kit also includes rabbit polyclonal and mouse monoclonal antibodies to examine total EphA4 expression levels and secondary reagents for rabbit polyclonal and mouse monoclonal antibody detection.

## 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 to 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.

## Product References (EP2731):

Julich, D. et al. (2009) *Development* 136:2913. (IHC: zebrafish embryos)

## Kit Components:

Catalog#	Description	Type	Size	Applications	Species Reactivity	MW (kDa)
EP2731	EphA4 (Tyr-602), phospho-specific [Conserved site]	Rabbit pAb	50 µl	WB, E, IHC	H, R, M, C, Z	120
EP2751	EphA4 (Tyr-779), phospho-specific [Conserved site]	Rabbit pAb	50 µl	WB, E	H, R, M, C	120
EP2711	EphA4 (C-terminal region)	Rabbit pAb	50 µl	WB, E	H, R, M	120
EM2801	EphA4 (N-terminal region)	mouse mAb	50 µl	WB, E	H, R, M, C	120
MS3001	Anti-Mouse Ig:HRP	Donkey pAb	100 µl	WB, E		
RS3251	Anti-Rabbit Ig Light-Chain Specific:HRP	Mouse mAb	100 µl	WB, E		

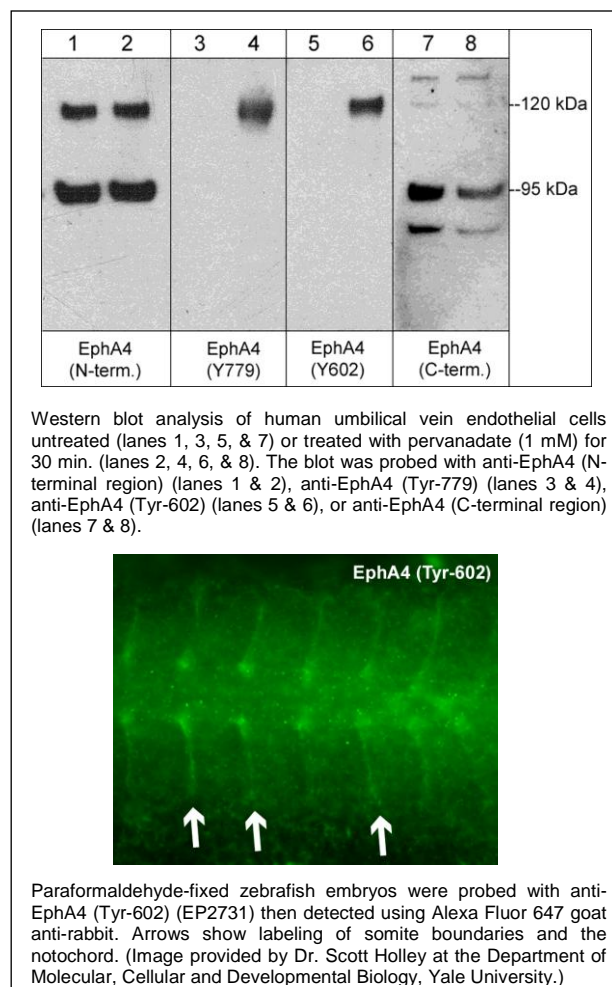
Applications: WB = Western blot, E = ELISA, IHC = Immunohistochemistry

Species: H = Human, R = Rat, M = Mouse, C = Chicken, Z = Zebrafish

## Buffers and Storage:

Rabbit polyclonal and mouse monoclonal affinity-purified antibodies are supplied in phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Secondary reagents are supplied in phosphate-buffered saline, 50% glycerol, and 1 mg/ml BSA. Store at -20°C. Stable for 1 year.



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