

# Anti-EphA4 (N-terminal region) Antibody

Catalog # AN1778

#### **Product Information**

Application WB
Primary Accession P54764
Host Mouse

**Clonality** Mouse Monoclonal

IsotypeIgG1Clone NamesM280Calculated MW109860

### **Additional Information**

Gene ID 2043 Other Names SEK, Eph

**Target/Specificity** 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.

**Dilution** WB~~1:1000

**Storage** Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store

at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions** Anti-EphA4 (N-terminal region) Antibody is for research use only and not for

use in diagnostic or therapeutic procedures.

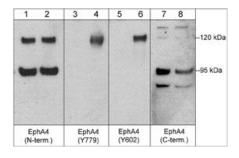
**Shipping** Blue Ice

## **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.

### **Images**



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).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.