

**EphB1 Antibody (C-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP7622a****Specification****EphB1 Antibody (C-term) Blocking Peptide - Product Information**Primary Accession [P54762](#)**EphB1 Antibody (C-term) Blocking Peptide - Additional Information****Gene ID 2047****Other Names**

Ephrin type-B receptor 1, ELK, EPH tyrosine kinase 2, EPH-like kinase 6, EK6, hEK6, Neuronally-expressed EPH-related tyrosine kinase, NET, Tyrosine-protein kinase receptor EPH-2, EPHB1, ELK, EPHT2, HEK6, NET

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [<a href=/product/products/AP7622a>AP7622a</a>](#) was selected from the C-term region of human EphB1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**EphB1 Antibody (C-term) Blocking Peptide - Protein Information****EphB1 Antibody (C-term) Blocking Peptide - Background**

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the  $\gamma$  phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The tyrosine kinase (TK) group is mainly involved in the regulation of cell-cell interactions such as differentiation, adhesion, motility and death. There are currently about 90 TK genes sequenced, 58 are of receptor protein TK (e.g. EGFR, EPH, FGFR, PDGFR, TRK, and VEGFR families), and 32 of cytosolic TK (e.g. ABL, FAK, JAK, and SRC families).

**EphB1 Antibody (C-term) Blocking Peptide - References**

Prevost, N., et al., Proc. Natl. Acad. Sci. U.S.A. 99(14):9219-9224 (2002).Wilkinson, D.G., Nat Rev Neurosci 2(3):155-164 (2001).Xu, Q., et al., Philos. Trans. R. Soc. Lond., B, Biol. Sci. 355(1399):993-1002 (2000).Holder, N., et al., Development 126(10):2033-2044 (1999).Stein, E., et al., J. Biol. Chem. 273(3):1303-1308 (1998).

**Name** EPHB1

**Synonyms** ELK, EPHT2, HEK6, NET

**Function**

Receptor tyrosine kinase which binds promiscuously transmembrane ephrin-B family ligands residing on adjacent cells, leading to contact-dependent bidirectional signaling into neighboring cells. The signaling pathway downstream of the receptor is referred to as forward signaling while the signaling pathway downstream of the ephrin ligand is referred to as reverse signaling. Cognate/functional ephrin ligands for this receptor include EFNB1, EFNB2 and EFNB3. During nervous system development, regulates retinal axon guidance redirecting ipsilaterally ventrotemporal retinal ganglion cells axons at the optic chiasm midline. This probably requires repulsive interaction with EFNB2. In the adult nervous system together with EFNB3, regulates chemotaxis, proliferation and polarity of the hippocampus neural progenitors. In addition to its role in axon guidance plays also an important redundant role with other ephrin-B receptors in development and maturation of dendritic spines and synapse formation. May also regulate angiogenesis. More generally, may play a role in targeted cell migration and adhesion. Upon activation by EFNB1 and probably other ephrin-B ligands activates the MAPK/ERK and the JNK signaling cascades to regulate cell migration and adhesion respectively. Involved in the maintenance of the pool of satellite cells (muscle stem cells) by promoting their self-renewal and reducing their activation and differentiation (By similarity).

**Cellular Location**

Cell membrane; Single-pass type I membrane protein Early endosome membrane. Cell projection, dendrite {ECO:0000250|UniProtKB:Q8CBF3}

**Tissue Location**

Preferentially expressed in brain.

**EphB1 Antibody (C-term) Blocking Peptide  
- Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)