

## Recombinant EPHB2 (570-987) protein

**Catalog No:** 81496, 81596

**Expressed In:** Baculovirus

**Quantity:** 20, 1000 µg

**Concentration:** 0.4 µg/µl

**Source:** Human

**Buffer Contents:** Recombinant EPHB2 (570-987) protein is supplied in 25 mM HEPES pH 7.5, 300 mM NaCl, 20% glycerol, 0.04% Triton X-100, 0.5 mM TCEP.

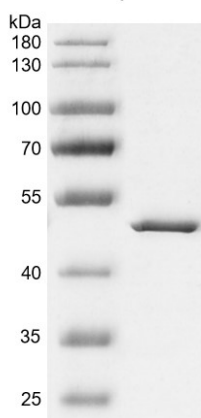
**Background:** **EPHB2** is a receptor tyrosine kinase, has a prototypical RTK topology including an N-terminal multidomain extracellular region, a membrane spanning region, and an intracellular region. **EPHB2** binds promiscuously transmembrane ephrin-B family ligands residing on adjacent cells, leading to contact-dependent bidirectional signaling into neighboring cells. Functions in axon guidance during development. Involved in the guidance of commissural axons, that form a major interhemispheric connection between the 2 temporal lobes of the cerebral cortex. Also involved in guidance of contralateral inner ear efferent growth cones at the midline and of retinal ganglion cell axons to the optic disk. In addition to axon guidance, also regulates dendritic spines development and maturation and stimulates the formation of excitatory synapses. Upon activation by EFNB1, abolishes the ARHGEF15-mediated negative regulation on excitatory synapse formation. Controls other aspects of development including angiogenesis, palate development and in inner ear development through regulation of endolymph production. Forward and reverse signaling through the EFNB2/EPHB2 complex regulate movement and adhesion of cells that tubularize the urethra and septate the cloaca. May function as a tumor suppressor. May be involved in the regulation of platelet activation and blood coagulation.

**Protein Details:** Recombinant EPHB2 (570-987) protein that includes amino acids 570-987 of human EPHB2 protein (accession number NP\_004433.2) was expressed in a baculovirus expression system, and contains an N-terminal FLAG tag. The molecular weight of the protein is 48.65 kDa.

**Application Notes:** This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.

### EPHB2 (570-987)



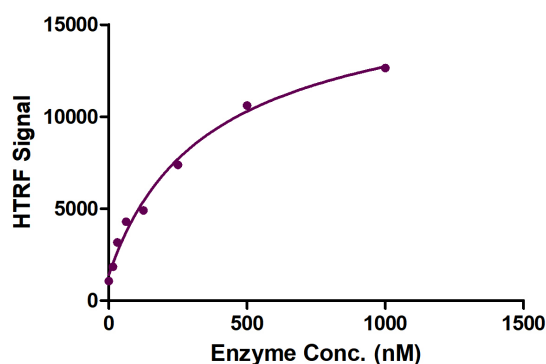
### Recombinant EPHB2 (570-987) protein

10% SDS-PAGE Coomassie staining

MW: 48.65 kDa

Purity:  $\geq 95\%$

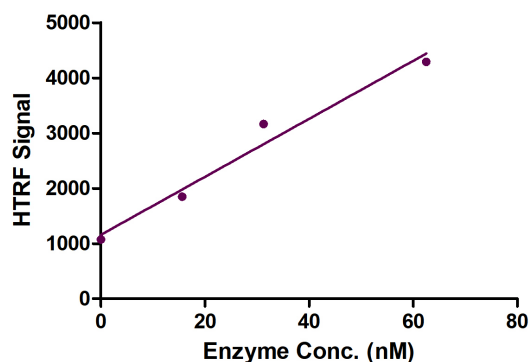
### EPHB2 (570-987) Titration



### HTRF assay for EPHB2 (570-987) activity

1  $\mu$ M TK substrate was incubated with different concentrations of EPHB2 (570-987) protein in a 10  $\mu$ l reaction system containing 1 $\times$ Enzymatic Buffer, 5 mM MgCl<sub>2</sub>, 1 mM MnCl<sub>2</sub>, 1 mM DTT, 5nM SEB and 100  $\mu$ M ATP for 1 hour. Then 10  $\mu$ l detection reagents containing anti-TK antibody (1:2) and SA-XL665 (1:100) diluted with 1 $\times$  Detection Buffer were added and incubated with the reactions for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.

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