

## EphA1 Protein, Human, Recombinant (His)

## General Information

Synonyms:	EPHT;EPH receptor A1;EPHA9;EPHT1;EPH
Protein Construction:	A DNA sequence encoding the human EPHA1 (EAL23789.1) (Met1-Glu547) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Lys 26
Species:	Human
Expression Host:	HEK293 Cells
Accession:	EAL23789.1
Molecular Weight:	58 kDa (predicted)

## QC Testing

Biological Activity:	Immobilized Human EphA1 His at 2 µg/ml (100 µl/well) can bind Human Ephrin-A1 Fch , the EC50 of Human Ephrin-A1 Fch is 25-90 ng/mL.
Purity:	> 95 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

## Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

**Stability & Storage:**

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

**Shipping:**

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

## Protein Background

EPHA1 or EPH receptor A1 belongs to the ephrin receptor subfamily of the protein-tyrosine kinase family. Receptors in the EPH subfamily typically have a single kinase domain and an extracellular region containing a Cys-rich domain and 2 fibronectin type III repeats. An important role of Eph receptors and their ligands ephrins is to mediate cell-contact-dependent repulsion. Eph receptors and ephrins also act at boundaries to channel neuronal growth cones along specific pathways, restrict the migration of neural crest cells, and via bidirectional signaling

prevent intermingling between hindbrain segments. Eph receptors and ephrins can also trigger an adhesive response of endothelial cells and are required for the remodeling of blood vessels. Eph receptors and ephrins have emerged as key regulators of the repulsion and adhesion of cells that underlie the establishment, maintenance, and remodeling of patterns of cellular organization. The ephrins and Eph receptors are implicated as positional labels that may guide the development of neural topographic maps.

### Reference

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- Pratt RL, et al. (2002) Activation of the EphA2 tyrosine kinase stimulates the MAP/ERK kinase signaling cascade. *Oncogene.* 21(50): 7690-9.
- Jennifer Walker-Daniels, et al. (2003) Differential Regulation of EphA2 in Normal and Malignant Cells. *Am J Pathol.* 162(4): 1037-1042.

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481