

## EphA4 Protein, Human, Recombinant (aa 610-887, GST)

### General Information

Protein Construction:	Recombinant human EPHA4 (610-887) was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.
Species:	Human
Expression Host:	Baculovirus-Insect Cells
Accession:	P54764
Molecular Weight:	~58 kDa

### QC Testing

Biological Activity:	The specific activity of EPHA4 was determined to be 70-83 nmol /min/mg by radioactive kinase assay.
Purity:	>90% as determined by SDS-PAGE.
Formulation:	Supplied as sterile 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, 25% glycerol.

### Preparation and Storage

#### Stability & Storage:

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:

Enzymes are highly recommended to be shipped at frozen temperature with dry ice. Shipment made at ambient temperature may seriously affect the activity of the ordered products.

### Protein Background

EPH receptor A4 (ephrin type-A receptor 4), also known as EphA4, belongs to the ephrin receptor subfamily of the protein-tyrosine kinase family which 16 known receptors (14 found in mammals) are involved: EPHA1, EPHA2, EPHA3, EPHA4, EPHA5, EPHA6, EPHA7, EPHA8, EPHA9, EPHA10, EPHB1, EPHB2, EPHB3, EPHB4, EPHB5, EPHB6. The Eph family of receptor tyrosine kinases (comprising EphA and EphB receptors) has been implicated in synapse formation and the regulation of synaptic function and plasticity<sup>6</sup>. EphA4 is enriched on dendritic spines of pyramidal neurons in the adult mouse hippocampus, and ephrin-A3 is localized on astrocytic processes that envelop spines. Eph receptor-mediated signaling, which is triggered by ephrins<sup>7</sup>, probably modifies the properties of synapses during synaptic activation and remodeling. Ephrin receptors are components of cell signalling pathways involved in animal growth and development, forming the largest sub-family of receptor tyrosine kinases (RTKs). The extracellular domain of an EphA4 interacts with ephrin ligands, which may be tethered to neighbouring cells. Ligand-mediated activation of Ephs induces various important downstream effects and Eph receptors have been studied for their potential roles in the development of cancer.

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