

EphA6 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	EPH receptor A6;Ehk2;m-ehk2;Hek12
Protein Construction:	A DNA sequence encoding the extracellular domain of mouse EphA6 (NP_031964.2) (Met 1-Gln 546) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Ser 28
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	G1K381
Molecular Weight:	59.5 kDa (predicted); 65 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized recombinant mouse EphA6 at 2 µg/ml (100 µl/well) can bind recombinant human EphrinA3 at a linear range of 0.31-10 ng/ml.
Purity:	> 97 % 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

Ephrin type-A receptor 6, also known as EphA6 or EHK2, 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 plasticity⁶. Eph receptor-mediated signaling, which is triggered by ephrins⁷, 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). 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. In the vomeronasal system, Ephrin-A5/EphA6 interactions mediate attraction or adhesion rather than repulsion.

Reference

Wilkinson DG. (2000) Eph receptors and ephrins: regulators of guidance and assembly. *Int Rev Cytol.* 196: 177-244.
Yamaguchi Y, et al. (2004) Eph receptors in the adult brain. *Curr Opin Neurobiol.* 14 (3): 288-96.
Hafner C, et al. (2004) Differential gene expression of Eph receptors and ephrins in benign human tissues and cancers. *Clin Chem.* 50 (3): 490-9.

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