Rat EphA4 Protein (His Tag)

Catalog Number: **80123-R08H**

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Biological Solution Specialist

General Information

Gene Name Synonym:

HEK8; SEK; TYRO1; 2900005C20Rik; AI385584; Cek8; Hek8; rb; Sek; Sek1; Tyro1

Protein Construction:

A DNA sequence encoding the rat EPHA4 (D3ZZK3) (Met1-Thr547) was expressed, fused with a polyhistidine tag at the C-terminus.

Source: Rat

Expression Host: Human Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized recombinant Rat EPHA4 Protein (His Tag) (Cat: 80123-R08H) at 10 μg/mL (100 μl/well) can bind Recombinant rat EFNA5-Fc (Cat: 80105-R02H) with a linear range of 7.8-12.5 ng/ml.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Val 20

Molecular Mass:

The recombinant rat EPHA4 comprises 539 amino acids and predicts a molecular mass of 59.8 kDa. The apparent molecular mass of the recombinant protein is approximately 71 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

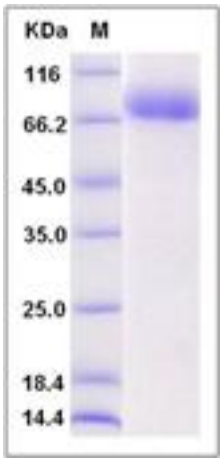
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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 plasticity6. 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 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). The extracellular domain of an EphA4 interacts with ephrin ligands, which may be tethered to neighbouring cells. Ligand-mediated activation of Ephs induce various important downstream effects and Eph receptors have been studied for their potential roles in the development of cancer.

References

1.Murai KK, *et al.* (2003) Control of hippocampal dendritic spine morphology through ephrin-A3/EphA4 signaling. Nat Neurosci. 6(2): 153-60.
2.Kullander K, *et al.* (2003) Role of EphA4 and EphrinB3 in local neuronal circuits that control walking. Science. 299(5614): 1889-92.
3.Smith A, *et al.* (1997) The EphA4 and EphB1 receptor tyrosine kinases and ephrin-B2 ligand regulate targeted migration of branchial neural crest cells. Curr Biol. 7(8): 561-70.