

Rat EphA4 Protein (Fc Tag)

Catalog Number: 80123-R02H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

EphA4

Protein Construction:

A DNA sequence encoding the rat EPHA4 (D3ZZK3) (Met1-Tyr547) was expressed, fused with the Fc region of human IgG1 at the C-terminus.

Source: Rat

Expression Host: HEK293 Cells

QC Testing

Purity: $\geq 95\%$ as determined by SDS-PAGE

Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized mouse EFNA5-His (Cat:50597-M08H) at 10 $\mu\text{g/ml}$ (100 $\mu\text{l/well}$) can bind Rat EPHA4-Fc, The EC_{50} of Rat EPHA4-Fc is 19.8-46.3 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°C

Predicted N terminal: Val 20

Molecular Mass:

The recombinant rat EPHA4/Fc is a disulfide-linked homodimer. The reduced monomer comprises 769 amino acids and has a predicted molecular mass of 85.3 kDa. The apparent molecular mass of the protein is approximately 98 kDa in SDS-PAGE under reducing conditions.

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:

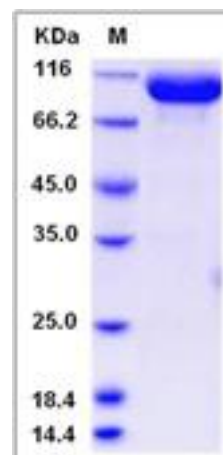
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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.

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