Rat EphB3 / HEK2 / Eph Receptor B3 Protein (His Tag, ECD)

Catalog Number: 81593-R08H

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

EphB3

Protein Construction:

A DNA sequence encoding the rat Ephb3 (NP_001099338.1) (Met1-Thr537) was expressed with a polyhistidine tag at the C-terminus.

Source: Rat

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE.

Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized rat EPHB3-His at 10 μg/ml (100 μl /well) can bind rat EFNB1-Fc(Cat:80106-R02H), The EC_{50} of rat EFNB1-Fc(Cat:80106-R02H) is 2-6ng/ml.

Endotoxin:

< 1.0 EU per μg 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: Leu 30

Molecular Mass:

The recombinant rat Ephb3 consists 519 amino acids and predicts a molecular mass of 57 kDa.

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:

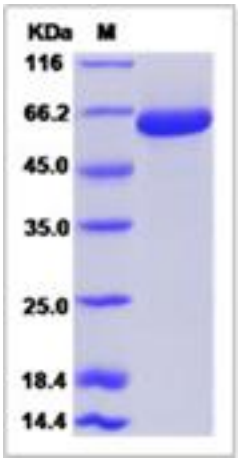
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Ephrin type-B receptor 3, also known as EphB3 or HEK2, 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. 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 induce various important downstream effects and Eph receptors have been studied for their potential roles in the development of cancer. EphB receptor tyrosine kinases are enriched at synapses, suggesting that these receptors play a role in synapse formation or function. We find that EphrinB binding to EphB induces a direct interaction of EphB with NMDA-type glutamate receptors. This interaction occurs at the cell surface and is mediated by the extracellular regions of the two receptors, but does not require the kinase activity of EphB.

References

1.Bergemann AD, *et al.* (1998) Ephrin-B3, a ligand for the receptor EphB3, expressed at the midline of the developing neural tube. Oncogene. 16(4): 471-80. 2.Hock B, *et al.* (1998) PDZ-domain-mediated interaction of the Eph-related receptor tyrosine kinase EphB3 and the ras-binding protein AF6 depends on the kinase activity of the receptor. Proc Natl Acad Sci U S A. 95(17): 9779-84. 3.Liu X, *et al.* (2006) EphB3: an endogenous mediator of adult axonal plasticity and regrowth after CNS injury. J Neurosci. 26(12): 3087-101.