

Human EphB3 / HEK2 Protein (aa 585-998, His & GST Tag)

Catalog Number: 13925-H20B1



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

ETK2; HEK2; TYRO6; AW456895; Cek10; Etk2; HEK2; MDK5; Sek4; Tyro6

Protein Construction:

A DNA sequence encoding the human EPHB3 (P54753) (Gln585-Val998) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

The specific activity was determined to be 90 nmol/min/mg using Poly(Glu:Tyr) 4:1 as substrate.

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: Met

Molecular Mass:

The recombinant human EPHB3 /GST chimera consists of 651 amino acids and has a calculated molecular mass of 74.7 kDa. The recombinant protein migrates as an approximately 64 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Supplied as sterile 20mM Tris, 500mM NaCl, pH 7.4, 10% gly

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:

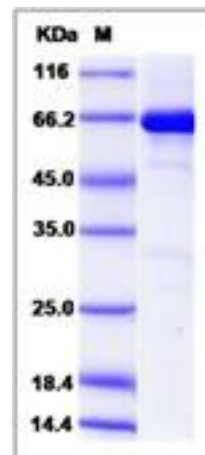
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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.

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