

# Mouse EphB2 / Hek5 Protein (His Tag)

Catalog Number: 51367-M08H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

Cek5; Drt; Erk; ETECK; Hek5; Nuk; Prkm5; Qek5; Sek3; Tyro5

### Protein Construction:

A DNA sequence encoding the mouse EPHB2 (NP\_034272.1) (Met1-Lys540) was expressed with a C-terminal polyhistidine tag.

**Source:** Mouse

**Expression Host:** HEK293 Cells

## QC Testing

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

### Bio Activity:

**1. Measured by its binding ability in a functional ELISA. 2. Immobilized mouse EPHB2-His at 10 µg/mL (100 µL/well) can bind mouse EFNB2-Fc(Cat:50598-M02H). The EC<sub>50</sub> of mouse EFNB2-Fc is 0.01-0.03 µg/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 19

### Molecular Mass:

The recombinant mouse EPHB2 comprises 533 amino acids and has a predicted molecular mass of 59.3 kDa. The apparent molecular mass of the protein is approximately 65 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:

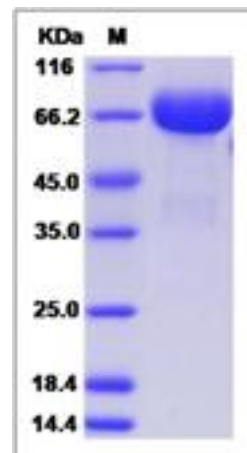
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Ephrin type-B receptor 2, also known as EphB2, 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. EphB2 receptor tyrosine kinase phosphorylates syndecan-2 and that this phosphorylation event is crucial for syndecan-2 clustering and spine formation. 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 plasticity<sup>6</sup>. 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.Zisch AH, *et al.* (1998) Complex formation between EphB2 and Src requires phosphorylation of tyrosine 611 in the EphB2 juxtamembrane region. *Oncogene*. 16 (20): 2657-70. 2.Yu HH, *et al.* (2001) Multiple signaling interactions of Abl and Arg kinases with the EphB2 receptor. *Oncogene*. 20 (30): 3995-4006. 3.Zisch AH, *et al.* (2000) Replacing two conserved tyrosines of the EphB2 receptor with glutamic acid prevents binding of SH2 domains without abrogating kinase activity and biological responses. *Oncogene*. 19 (2): 177-87.

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For US Customer: Fax: 267-657-0217 • Tel: 215-583-7898

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