

Rat Ephrin-B1 / EFNB1 Protein (His Tag)

Catalog Number: 80106-R08H



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General Information

Gene Name Synonym:

EFNB1

Protein Construction:

A DNA sequence encoding the rat EFNB1 (P52796) extracellular domain (Met 1-Thr 229) was expressed, fused 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:

Immobilized rat EFNB1-His at 10 µg/ml (100 µl/well) can bind biotinylated mouse EphB3-His (Cat:50581-M08H). The EC₅₀ of biotinylated mouse EphB3-His (Cat:50581-M08H) is 6.3-14.6 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: Ala 25

Molecular Mass:

The recombinant rat EFNB1 comprises 216 amino acids and predicts a molecular mass of 23.8 kDa. The apparent molecular mass of the ratEFNB1 is approximately 36 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.5

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:

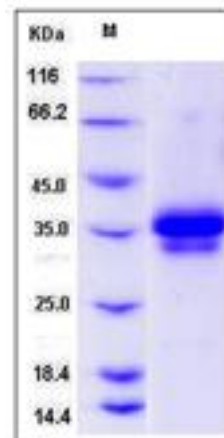
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Ephrin-B1 also known as EFNB1, is a member of the ephrin family. The transmembrane-associated ephrin ligands and their Eph family of receptor tyrosine kinases are expressed by cells of the SVZ. Eph/ephrin interactions are implicated in axon guidance, neural crest cell migration, establishment of segmental boundaries, and formation of angiogenic capillary plexi. Eph receptors and ephrins are divided into two subclasses, A and B, based on binding specificities. Ephrin subclasses are further distinguished by their mode of attachment to the plasma membrane: ephrin-A ligands bind EphA receptors and are anchored to the plasma membrane via a glycosylphosphatidylinositol (GPI) linkage, whereas ephrin-B ligands bind EphB receptors and are anchored via a transmembrane domain. An exception is the EphA4 receptor, which binds both subclasses of ephrins. EphrinB1 and B class Eph receptors provide positional cues required for the normal morphogenesis of skeletal elements. Another malformation, preaxial polydactyly, was exclusively seen in heterozygous females in which expression of the X-linked ephrinB1 gene was mosaic, so that ectopic EphB-ephrinB1 interactions led to restricted cell movements and the bifurcation of digital rays.

References

1. Davy A, *et al.* (2004) Ephrin-B1 forward and reverse signaling are required during mouse development. *Genes Dev.* 18(5): 572-83.
2. Compagni A, *et al.* (2003) Control of skeletal patterning by ephrinB1-EphB interactions. *Dev Cell.* 5(2): 217-30.
3. Wieland I, *et al.* (2004) Mutations of the ephrin-B1 gene cause craniofrontonasal syndrome. *Am J Hum Genet.* 74(6): 1209-15.

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