

# Human Ephrin-B1 / EFNB1 Protein (His & Fc Tag)

Catalog Number: 10894-H03H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

CFND; CFNS; EFB1; EFL3; Eik-L; EPLG2; LERK2

### Protein Construction:

A DNA sequence encoding the human EFNB1 (NP\_004420.1) extracellular domain (Met 1-Lys 237) was fused with a C-terminal Fc region of human IgG1 tag followed by a polyhistidine tag.

**Source:** Human

**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 mouse EphB3 at 2 µg/ml (100 µl/well) can bind human EFNB1 Fc chimera with a linear range of 1.56-25 ng/ml.**

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

**Predicted N terminal:** Leu 28

### Molecular Mass:

The recombinant human EFNB1/Fc chimera is a disulfide-linked homodimeric protein. The reduced monomer consists of 458 amino acids and predicts a molecular mass of 51.2 KDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of the protein is approximately 64 and 36 KDa due to glycosylation.

### 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

### Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

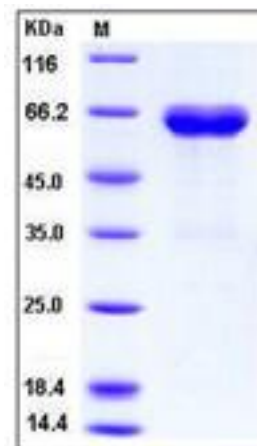
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**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.