Data Sheet (Cat.No.TMPY-03899)

TargetMol

Ephrin B2/EFNB2 Protein, Canine, Recombinant (hFc)

General Information

Synonyms:	ephrin-B2
Protein Construction:	A DNA sequence encoding the canine EFNB2 (B0LDS6) (Met1-Ala229) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Ile 28
Species:	Canine
Expression Host:	HEK293 Cells
Accession:	B0LDS6
Molecular Weight:	49.2 kDa (predicted); 58 and 35 kDa (reducing conditions)

QC Testing

Biological Activity:	1. Measured by its binding ability in a functional ELISA. 2. Immobilized human EphB4-His at 10μg/mL (100μL/well) can bind canine EFNB2-Fc3. The EC50 of canine EFNB2-Fc3 is 25.8-60.2 ng/mL.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

EphrinB2 also known as EFNB2 is a member of the ephrin family. EphrinB2 is involved in establishing arterial versus venous identity and perhaps in anastamosing arterial and venous vessels at their junctions. 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. EphrinB2 expression progressively extends from the arterial endothelium to surrounding smooth muscle cells and to pericytes, suggesting that ephrin-B2 may play an important role during formation of the arterial muscle wall.

Reference

Wang HU,et al.(1998) Molecular distinction and angiogenic interaction between embryonic arteries and veins revealed by ephrin-B2 and its receptor Eph-B4. Cell. 93(5): 741-53.
Gale NW,et al.(2001) Ephrin-B2 selectively marks arterial vessels and neovascularization sites in the adult, with expression in both endothelial and smooth-muscle cells. Dev Biol. 230(2): 151-60.
Shin D,et al.(2001) Expression of ephrinB2 identifies a stable genetic difference between arterial and venous vascular smooth muscle as well as endothelial cells, and marks subsets of microvessels at sites of adult neovascularization. Dev Biol. 230(2): 139-50.