# Data Sheet (Cat.No.TMPY-03201)

TargetMol

## Ephrin B3/EFNB3 Protein, Rat, Recombinant (hFc)

### General Information

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| Synonyms: | ephrin-B3 |
| Protein Construction: | A DNA sequence encoding the rat EFNB3 (NP_001094450) (Met1-Ser224) was expressed, fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Leu 28 |
| Species: | Rat |
| Expression Host: | HEK293 Cells |
| Accession: | A6HFR3 |
| Molecular Weight: | 48.7 kDa (predicted); 55 and 34 kDa (reducing conditions) |

### QC Testing

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| Biological Activity: | Measured by its binding ability in a functional ELISA. Immobilized mouse EphB3-His at 10 μg/ml (100 μl/well) can bind rat EFNB3-Fc, The EC50 of rat EFNB3-Fc is 14.1-33.2 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

Ephrin B3 belongs to the ephrin family. Ephrins are divided into the ephrin-A (EFNA) class, which are anchored to the membrane by a glycosylphosphatidylinositol linkage, and the ephrin-B (EFNB) class, which are transmembrane proteins. Ephrin B3 is important in brain development as well as in its maintenance. It is especially important for forebrain function since its expression levels were particularly high in several forebrain subregions compared to other brain subregions. Ephrin B3 binds to, and induce the collapse of, commissural axons/growth

cones in vitro. It may play a role in constraining the orientation of longitudinally projecting axons.

Reference

Takemoto M,et al.(2002) Ephrin-B3-EphA4 interactions regulate the growth of specific thalamocortical axon populations in vitro. Eur J Neurosci. 16(6):1168-72.
Brckner K,et al.(1999) EphrinB ligands recruit GRIP family PDZ adaptor proteins into raft membrane microdomains. Neuron. 22(3):511-24.
Bergemann A,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.



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