Data Sheet (Cat.No.TMPY-01424)

TargetMol

EphB6 Protein, Human, Recombinant (His)

General Information

Synonyms:	EPHB5;EPH receptor B6;HEP
Protein Construction:	The extracellular domain (Met 1-Ser 579) of human EphB6 (NP_004436.1) precursor was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Leu 17
Species:	Human
Expression Host:	HEK293 Cells
Accession:	O15197
Molecular Weight:	61.6 kDa (predicted); 60-70 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Immobilized Human EphB6 His at 2 μg/mL (100 μL/well) can bind Human Ephrin B2 His & hFc , the EC50 of Human Ephrin B2 His & hFc is 6-48ng/mL.
Purity:	> 92 % 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

Ephrins are divided into the ephrin-A (EFNA) class and the ephrin-B (EFNB) class based on their structures and sequence relationships. Ephrin receptors make up the largest subgroup of the receptor tyrosine kinase (RTK) family. EphB6 is an unusual Eph receptor, lacking catalytic capacity due to alterations in its kinase domain. Interestingly, increased metastatic activity is associated with reduced EphB6 receptor expression in several tumor types, including breast cancer. This emphasizes the potential of EphB6 to act as a suppressor of cancer

aggressiveness. EphB6 suppress cancer invasiveness through c-Cbl-dependent signaling, morphologic changes, and cell attachment and indicate that EphB6 may represent a useful prognostic marker and a promising target for therapeutic approaches. EphB6 can both positively and negatively regulate cell adhesion and migration, and suggest that tyrosine phosphorylation of the receptor by an Src family kinase acts as the molecular switch for the functional transition. In addition, Ephrin-B2 may be a physiological ligand for the EphB6 receptor.

Reference

Munthe E,et al.(2000)Ephrin-B2 is a candidate ligand for the Eph receptor, EphB6. FEBS Lett. 466(1): 169-74.
Matsuoka H,et al.(2005) Biphasic functions of the kinase-defective Ephb6 receptor in cell adhesion and migration. J Biol Chem. 280(32): 29355-63.
Truitt L,et al.(2010) The EphB6 receptor cooperates with c-Cbl to regulate the behavior of breast cancer cells. Cancer Res. 70(3): 1141-53.

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