Data Sheet (Cat.No.TMPY-04937)

TargetMol

PDGFRB Protein, Human, Recombinant (His), Biotinylated

General Information

Synonyms:	platelet-derived growth factor receptor, beta polypeptide;CD140B;PENTT;PDGFR1;IBGC4; PDGFR;IMF1;platelet-derived growth factor receptor, β polypeptide;KOGS;JTK12;PDGFR-1
Protein Construction:	A DNA sequence encoding the human PDGFRβ (NP_002600.1) extracellular domain (Met1-Lys531) was expressed, with a C-terminal polyhistidine tag. The expressed protein was biotinylated in vitro. Predicted N terminal: Leu 33
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P09619-1
Molecular Weight:	57.6 kDa (predicted)

QC Testing

Biological Activity:	1.Measured by its binding ability in a functional ELISA. 2. Immobilized biotinylated human PDGFRb-His at 10μg/mL (100μL/well) can bind Cynomolgus PDGFB-Fc, The EC50 of Cynomolgus PDGFB-Fc is 30-80ng/mL.
Purity:	> 90 % 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 Sterile PBS. 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

The cluster of differentiation (CD) system is commonly used as cell markers in Immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules associating with the immune

function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then alter the behavior of the cell. Some CD proteins do not take part in cell signal process but have other functions such as cell adhesion. CD140b, also known as PDGFRB, is a member of the CD system. CD140b is a cell surface tyrosine kinase receptor essencial for development interacting with the platelet-derived growth factors (PDGFs) which serves as mitogens for mesenchymal cells. CD140b can bind with platelet-derived growth factor (PDGF)-B, that are secreted by tumors and phosphorylation of PDGFR-β was correlated with depth of cancer invasion at statistically significant level.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

Zola H,et al.(2007) CD molecules 2006-human cell differentiation molecules. J Immunol Methods. 318 (1-2): 1-5.
Ho IC,et al.(2009) GATA3 and the T-cell lineage: essential functions before and after T-helper-2-cell differentiation. Nat Rev Immunol. 9 (2): 125-35.
Matesanz-Isabel J,et al.(2011) New B-cell CD molecules. Immunology Letters.134 (2): 104-12.
Suzuki S,et al.(2010) Clinicopathological significance of platelet-derived growth factor (PDGF)-B and vascular endothelial growth factor-A expression, PDGF receptor- phosphorylation, and microvessel density in gastric cancer. BMC cancer. 10: 659.