Data Sheet (Cat.No.TMPY-01095)

TargetMol

Podoplanin Protein, Mouse, Recombinant (His & hFc)

General Information

Synonyms:	T1a;T1-α;RANDAM-2;T1α;T1-alpha;podoplanin;T1alpha;OTS-8;Gp38
Protein Construction:	A DNA sequence encoding the extracellular domain (Met 1-Leu 141) of mouse PDPN (NP_034459.2) precursor was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus. Predicted N terminal: Gly 23
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q62011
Molecular Weight:	40.6 kDa (predicted); 60-65 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Immobilized mouse PDPN-Fch at 10 μg/ml (100 μl/well) can bind biotinylated human CLEC1B-His , The EC50 of biotinylated human CLEC1B-His is 0.04-0.08 μg/ml.
Purity:	> 97 % 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

Podoplanin, also known as PDPN, is a type-I integral membrane glycoprotein with diverse distribution in human tissues. The physiological function of this protein may be related to its mucin-type character. The homologous protein in other species has been described as a differentiation antigen and influenza-virus receptor. The specific function of this protein has not been determined. Alternatively spliced transcript variants encoding different

isoforms have been identified.PDPN is a mucin-type glycoprotein negatively charged by extensive O-glycosylation and a high content of sialic acid, which expresses the adhesive property. It is selectively expressed in lymphatic endothelium as well as lymphangiomas, Kaposi sarcomas, and in a subset of angiosarcomas with probable lymphatic differentiation. PDPN may contribute to form odontoblastic fiber or function as the anchorage to the tooth development and in proliferating epithelial cells of cervical loop and apical bud. The intensity of podoplanin expression is negatively correlated with the expression of CD34 and factor VIII. Podoplanin would be useful as a diagnostic marker for epithelioid hemangioendothelioma in liver tumors.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

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