Data Sheet (Cat.No.TMPY-03702)

TargetMol

P-Selectin Protein, Mouse, Recombinant (His)

General Information

Synonyms:	Grmp;PADGEM;CD62P;LECAM3;selectin P (granule membrane protein 140kDa, antigen CD62); GMP-140
Protein Construction:	A DNA sequence encoding the mouse SELP (Q01102) (Met1-Ala709) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Trp 42
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q01102
Molecular Weight:	74 kDa (predicted); 116 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured by the ability of the immobilized protein to support the adhesion of U937 cells. When 5 x 10E4 cells/well are added to SELP-coated plates (5 μg/mL and 100 μL/well), approximately >60% cells will adhere specifically after 60 minutes at 37℃.
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

P selectin (SELP) is a 140kDa protein that is stored in the alpha-granules of platelets and Weibel-Palade bodies of endothelial cells. SELP mediates rapid rolling of leukocyte rolling over vascular surfaces during the initial steps in inflammation through interaction with PSGL1. P selectin is a cell adhesion molecule on the surface of activated

endothelial cells. Cellular adhesion molecules are a large family of proteins that attach the cytoskeleton and intracellular signaling cascades with the extracellular environment. SELP is a calcium-dependent receptor for myeloid cells that binds to sialylated forms of Lewis blood group carbohydrate antigens on neutrophils and monocytes. This protein redistributes to the plasma membrane during platelet activation and degranulation and mediates the interaction of activated endothelial cells or platelets with leukocytes.

Reference

Johnson-Tidey RR, et al. (1994) Increase in the adhesion molecule P-selectin in endothelium overlying atherosclerotic plaques. Coexpression with intercellular adhesion molecule-Am J Pathol. 144(5):952-61.

Walcheck B, et al. (1996) Neutrophil-neutrophil interactions under hydrodynamic shear stress involve L-selectin and PSGL-A mechanism that amplifies initial leukocyte accumulation of P-selectin in vitro. J Clin Invest. 98(5):1081-7.

Foreman KE, et al. (1994) C5a-induced expression of P-selectin in endothelial cells. J Clin Invest. 94(3):1147-55.

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