Data Sheet (Cat.No.TMPY-01026)

TargetMol

Alpha 2 Antiplasmin/SerpinF2 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	AI747498;α 2 Antiplasmin/SerpinF2;Pli;Serpimf2;serpin peptidase inhibitor, clade F, member 2
Protein Construction:	A DNA sequence encoding the mouse Serpin F2 (NP_032904.1) (Met 1-Lys 491) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Val 28
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q5ND36
Molecular Weight:	53.6 kDa (predicted); 60-65 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its ability to inhibit trypsin cleavage of a fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH2. The IC50 value is < 0.5 nM as measured in 100μL reaction mixture containing 1.25 ng trypsin, 10 μM substrate, 50 mM Tris, 10 mM CaCl2, 0.15 M NaCl, pH 7.5.
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.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

SerpinF2, also known as alpha-2 antiplasmin (alpha-2 AP), is a member of the Serpin superfamily. SerpinF2 is the principal physiological inhibitor of serine protease plasmin, and as well as, an efficient inhibitor of trypsin and chymotrypsin. This protease is produced mainly by liver and kidney, and also expressed in muscle, intestine,

central nervous system, and placenta at a moderate level. It is indicated that Serpin F2 is a key regulator of plasmin-mediated proteolysis in these tissues. Alpha-2 AP is an unusual serpin in that it contains extensive N- and C-terminal sequences flanking the serpin domain. The N-terminal sequence is crosslinked to fibrin by factor XIIIa, whereas the C-terminal region mediates the initial interaction with plasmin. SerpinF2 is one of the inhibitors of fibrinolysis, which acts as the primary inhibitor of plasmin(ogen). It is a specific plasmin inhibitor, and is important in modulating the effectiveness and persistence of fibrin with respect to its susceptibility to digestion and removal by plasmin. Alpha-2 AP plays the dominant role in inhibiting both plasma clot lysis and thrombus lysis, and accordingly, the congenital deficiency of Alpha-2 antiplasmin causes a rare bleeding disorder because of increased fibrinolysis. Thus, it may be a useful target for developing more effective treatment of thrombotic diseases.

Reference

Lee KN,et al.(2004) Alpha2-antiplasmin: potential therapeutic roles in fibrin survival and removal. Curr Med Chem Cardiovasc Hematol Agents. 2(4): 303-10.

Matsuno H. (2006) Alpha2-antiplasmin on cardiovascular diseases. Curr Pharm Des. 12(7): 841-7.

Burnouf T,et al.(2007) Impact of Triton X-100 on alpha 2-antiplasmin (SERPINF2) activity in solvent/detergent-treated plasma. Biologicals. 35(4): 349-53.

Carpenter SL,et al.(2008) Alpha2-antiplasmin and its deficiency: fibrinolysis out of balance. Haemophilia. 14(6): 1250-4.