

Mouse SerpinF2 Protein (His Tag)

Catalog Number: 50167-M08H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

AI747498; Pli; Serpimf2

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.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to inhibit trypsin cleavage of a fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH₂ (Anaspec, Catalog#27114). The IC₅₀ value is < 0.5 nM as measured in 100μL reaction mixture containing 1.25 ng trypsin (Sigma, Catalog#T1426), 10 μM substrate, 50 mM Tris, 10 mM CaCl₂, 0.15 M NaCl, pH 7.5.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Val 28

Molecular Mass:

The secreted recombinant mouse Serpin F2 consists of 475 amino acids and has a calculated molecular mass of 53.6 kDa. As a result of glycosylation, the recombinant protein migrates as an approximately 60-65 kDa protein in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

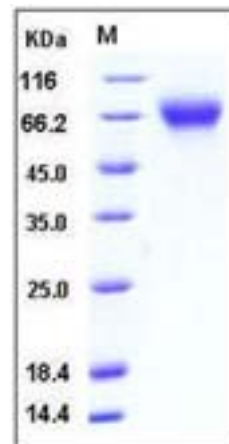
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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 also express this protein 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.

References

1. 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.
2. Matsuno H. (2006) Alpha2-antiplasmin on cardiovascular diseases. *Curr Pharm Des*. 12(7): 841-7.
3. 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.

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