

Human SerpinD1 Protein (His Tag)

Catalog Number: 10295-H08H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

D22S673; HC2; HCF2; HCII; HLS2; LS2; SerpinD1; THPH10

Protein Construction:

A DNA sequence encoding the human SerpinD1 precursor (NP_000176.2) (Met 1-Ser 499) was expressed with a C-terminal polyhistidine tag.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

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: Gly 20

Molecular Mass:

The mature recombinant human SerpinD1 consists of 491 amino acids and predicts a molecular mass of 56.4 kDa. By SDS-PAGE under reducing conditions, the apparent molecular mass of rhSerpinD1 is approximately 65-70 kDa as a result of glycosylation.

Formulation:

Lyophilized from sterile 50 mM Tris, 100 mM NaCl, 8% Glycerol, 10% Trehalose, 0.02% Tween 80, pH 8.5.

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:

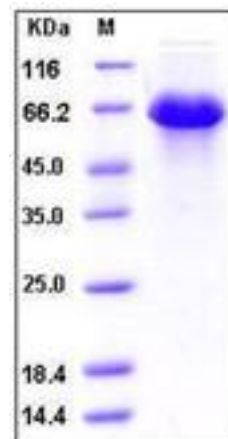
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

SerpinD1, also known as heparin cofactor II (HCII), is a member of Serpin superfamily of the serine proteinase inhibitors. HCII is a glycoprotein in human plasma that inhibits thrombin and chymotrypsin, and the rate of inhibition of thrombin is rapidly increased by Dermatan sulfate (DS), heparin (H) and glycosaminoglycans (GAG). The stimulatory effect of glycosaminoglycans on the inhibition is mediated, in part, by the N-terminal acidic domain of HCII. Interestingly, a C-terminal His-tagged recombinant HCII exhibits enhanced activity of thrombin inhibition. It has been suggested that HCII plays a unique and important role in vascular homeostasis, and accordingly mutations in this gene or congenital HCII deficiency is potentially associated with thrombosis. HCII specifically inhibits thrombin action at the site of vascular wall injury and HCII-thrombin complexes have been detected in human plasma. HCII protects against thrombin-induced vascular remodeling in both humans and mice and suggest that HCII is a predictive biomarker and therapeutic target for atherosclerosis. SerpinD1 also inhibits chymotrypsin, but in a glycosaminoglycan-independent manner.

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