

## Recombinant Human SerpinD1 Protein (His Tag)

**Catalog No.** PKSH031703

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

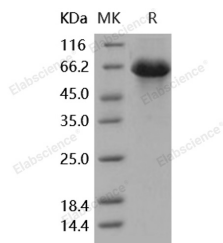
### Description

<b>Synonyms</b>	D22S673;HC2;HCF2;HCII;HLS2;LS2;SerpinD1;THPH10
<b>Species</b>	Human
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met 1-Ser 499
<b>Accession</b>	NP_000176.2
<b>Calculated Molecular Weight</b>	56.4 kDa
<b>Observed molecular weight</b>	65-70 kDa
<b>Tag</b>	C-His
<b>Bioactivity</b>	Immobilized recombinant human SerpinD1-His at 10 µg/ml (100 µl/well) can bind biotinylated recombinant mouse ELANE-His with a linear range of 0.15-10.0 µg/ml.

### Properties

<b>Purity</b>	> 97 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

### Data



> 97 % as determined by reducing SDS-PAGE.

### Background

#### For Research Use Only

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.