

Active Recombinant Human SERPING1 protein

Cat. No. SERPING1-108H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human SERPING1(56–500 aa) was expressed in CHO.
Species	Human
Source	CHO
ProteinLength	56-500 a.a.
Description	<p>C1 Inhibitor is a member of the serpin family of structurally related proteins, and is the primary regulator of the immune complement system. C1Inhibitor is a protease inhibitor that functions to inhibit the complement system in order to prevent over-activation or spontaneous activation. Inhibition is achieved by binding to and irreversibly inhibiting the C1r and C1s proteases of the C1 complex, which has the effect of shutting down all subsequent downstream events in the complement activation cascade. C1inhibitor can also inhibit various other proteases, including Kallikrein, Factor XIa, and Factor XIIa. Deficiencies in C1inhibitor are the primary cause of hereditary angioedema (HAE, hereditary angioneurotic edema), a disease characterized by edema in the respiratory and gastrointestinal tracts. In certain clinical situations, the direct administration of C1inhibitor can be used to treat HAE and certain other conditions.</p>
Form	Sterile filtered through a 0.2 micron filter. Lyophilized from 10 mM Sodiun Phosphate, PH 7.5.
Bio-activity	Measured by its ability to inhibit recombinant human complement component C1a

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

cleavage of a colorimetric peptide substrate, N Carbobenzyloxy-Lys-ThioBenzyl ester (Z-K-SBzl). The expected IC50 is ≤ 2.6 nM.

Molecular Mass

Is a highly glycosylated glycoprotein containing 445 amino acid residues (49.4kDa). Glycosylated C1 Inhibitor migrates at an apparent molecular weight of approximately 80-90 kDa by SDS PAGE analysis under reducing conditions.

AA Sequence

VEPILEVSS LPTTNSTTN SATKITANT TDEPTTQPT TEPTTQPTI QPTQPTTQL
 PTDSPTQPT TGSFCPGPV TLCSDLESH STEAVLGDA LVDFSLKLY HAFSAMKKV
 ETNMAFSPF SIASLLTQV LLGAGENTK TNLESILSY PKDFTCVHQ ALKGFTTKG
 VTSVSQIFH SPDLAIRDT FVNASRTLY SSSPRVLSN NSDANLELI NTWVAKNTN
 NKISRLLDS LPSDTRLVL LNAIYLSAK WKTTDFPKK TRMEPFHFK NSVIKVPMM
 NSKKYPVAH FIDQTLKAK VGQLQLSHN LSLVILVPQ NLKHRLEDM EQALSPSVF
 KAIMEKLEM SKFQPTLLT LPRIKVTTTS QDMLSIMEK LEFFDFSVD LNLGGLTED
 PDLQVSAMQ HQTVLELTE TGVEAAAAS AISVARTLL VFEVQQPFL FVLWDQQHK
 FPFVFMGRVY DPRA

Endotoxin

Endotoxin level is < 0.10 ng/ug of the protein(< 1 EU/ug).

Purity

Above 95% by SDS-PAGE gel and HPLC analyses.

Storage

Store at -20 centigrade.

Reconstitution

Centifuge the viar prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. For extended storage, it is recommended to furthur dilute in a buffer containing a carrier protein(example 0.1% BSA) and store in working aliquots at -20 centigrade to -80 centigrade.

GENE INFORMATION

Gene Name

SERPING1 serpin peptidase inhibitor, clade G (C1 inhibitor), member 1 [Homo

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	sapiens]
Official Symbol	SERPING1
Synonyms	SERPING1; serpin peptidase inhibitor, clade G (C1 inhibitor), member 1; C1NH, serine (or cysteine) proteinase inhibitor, clade G (C1 inhibitor), member 1, (angioedema, hereditary); plasma protease C1 inhibitor; angioedema; hereditary; C1 INH; C1IN; HAE1; HAE2; serpin G1; C1-inhibiting factor; C1 esterase inhibitor; complement component 1 inhibitor; serine/cysteine proteinase inhibitor clade G member 1; C1NH; C1INH;
Gene ID	710
mRNA Refseq	NM_000062
Protein Refseq	NP_000053
MIM	606860
UniProt ID	P05155
Chromosome Location	11q12-q13.1
Pathway	Complement and Coagulation Cascades, organism-specific biosystem; Complement and coagulation cascades, organism-specific biosystem; Complement and coagulation cascades, conserved biosystem; Formation of Fibrin Clot (Clotting Cascade), organism-specific biosystem; Hemostasis, organism-specific biosystem; Intrinsic Pathway, organism-specific biosystem; Pertussis, organism-specific biosystem;

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Function

complement binding; peptidase inhibitor activity; protein binding; serine-type endopeptidase inhibitor activity;

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