

# C1 Inhibitor, Human Recombinant

<b>CATALOG #:</b>	7120-50	50 µg
	7120-200	200 µg
<b>ALTERNATE NAMES:</b>	Plasma protease C1, inhibitor, C1inh, C1 Esterase Protein, C1-inhibiting factor, Serpin G1	
<b>SOURCE:</b>	CHO cells	
<b>PURITY:</b>	≥ 95% by SDS-PAGE gel and HPLC analyses	
<b>MOL. WEIGHT:</b>	49.4 kDa	
<b>ENDOTOXIN LEVEL:</b>	< 0.1 ng/µg of protein (<1EU/µg).	
<b>FORM:</b>	Lyophilized	
<b>FORMULATION:</b>	Sterile filtered through a 0.2 micron filter. Lyophilized with 10 mM sodium phosphate, pH 7.5.	
<b>STORAGE CONDITIONS:</b>	Store at -20°C. After reconstitution, aliquot and store at -20°C to -80°C. Avoid repeated freezing and thawing cycles.	

**RECONSTITUTION:**

Centrifuge the vial 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 further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

**DESCRIPTION:**

C1 Inhibitor is a member of the serpin family of structurally related proteins, and is the primary regulator of the immune complement system. C1 Inhibitor 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. Recombinant Human C1 Inhibitor is a highly glycosylated glycoprotein containing 445 amino acid residues (49.4kDa), corresponding to amino acids 56 – 500 of the C1 inhibitor precursor, and is fully functional in its ability to inhibit the C1 complex. Glycosylated C1 Inhibitor migrates at an apparent molecular weight of approximately 80-90 kDa by SDS PAGE analysis under reducing conditions.

**BIOLOGICAL ACTIVITY:**

Measured by its ability to inhibit recombinant human complement component C1a cleavage of a colorimetric peptide substrate, N Carbobenzyloxy-LysThioBenzyl ester (Z-K-SBzl). The expected IC<sub>50</sub> is ≤ 2.6 nM

**AMINO ACID SEQUENCE:**

VEPILEVSSL PTTNSTTNSA TKITANTTDE PTTQPTTEPT TQPTIQPTQP TTQLPTDSPT  
 QPTTGSGFCPG PVTLCSDLES HSTEAVLGDA LVDFSLKLYH AFSAMKKVET  
 NMAFSPFSIA SLLTQVLLGA GENTKTNLES ILSYPKDFTC VHQALKGFTT  
 KGVTSVSIQIF HSPDLAIRDT FVNASRTLYS SSPRVLSNNS DANLELINTW  
 VAKNTNKKIS RLLDSLPSDT RLVLLNAIYL SAKWKTTTFDP KKTRMEPFHF  
 KNSVIKVPMM NSKYPVAHF IDQTLKAKVG QLQLSHNLSL VILVPQNLKH  
 RLEDMEQALS PSVFKAIMEK LEMSKFQPTL LTLPRIKVTT SQDMLSIMEK  
 LEFFDFSIDL NLCGLTEDPD LQVSAMQHQT VLELTETGVE AAAASISVA  
 RTLLVFEVQQ PFLFVLWDQQ HKFVPFMGRV YDPRA

**RELATED PRODUCTS:**

- Serpin E1/PAI-1, human recombinant (Cat. No. 4731-10, -100, -1000)
- Serpin A6 Antibody (Cat. No. 3906-100)
- Serpin A6 Blocking peptide (Cat. No. 3906BP-50)
- Human Recombinant PAI-1 (Cat. No. 6377-100)
- PEDF, human recombinant (Cat. No. 4988-20, -100, -1000)
- Vaspin (human) Serum ELISA Kit (Cat. No. K4917-100)
- Vaspin, human recombinant (Cat. No. 4915-25, -1000)

**FOR RESEARCH USE ONLY! Not to be used in humans.**