C1 Inhibitor Human Chinese Hamster Ovary Cells (CHO)

Product Data Sheet

Type: Recombinant
Source: Chinese Hamster Ovary Cells (CHO)
Species: Human
Other names: Plasma protease C1, inhibitor, C1inh, C1 Esterase Protein, C1-inhibiting factor, Serpin G1

Cat. No.:

RBG100930050	(50 µg)
RBG100930200	(200 µg)
RBG100931000	(1mg)

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 C1 inhibitor 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 C1 inhibitor 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.

Research topic

Apoptosis, Immune Response, Infection and Inflammation

Amino Acid Sequence

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VEPILEVSSL PTTNSTTNSA TKITANTTDE PTTQPTTEPT TQPTIQPTQP TTQLPTDSPT QPTTGSFCPG PVTLCSDLES
HSTEAVLGDA LVDFSLKLYH AFSAMKKVET NMAFSPFSIA SLLTQVLLGA GENTKTNLES ILSYPKDFTC VHQALKGFTT
KGVTSVSQIF HSPDLAIRDT FVNASRTLYS SSPRVLSNNS DANLELINTW VAKNTNNKIS RLLDSLPSDT RLVLLNAIYL
SAKWKTTFDP KKTRMEPFHF KNSVIKVPMM NSKKYPVAHF IDQTLKAKVG QLQLSHNLSL VILVPQNLKH RLEDMEQALS
PSVFKAIMEK LEMSKFQPTL LTLPRIKVTT SQDMLSIMEK LEFFDFSYDL NLCGLTEDPD LQVSAMQHQT VLELTETGVE
AAAASAISVA RTLLVFEVQQ PFLFVLWDQQ HKFPVFMGRV YDPRA
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Source

Chinese Hamster Ovary Cells (CHO)

Purity

95%

Biological Activity

Measured by its ability to inhibit recombinant human complement component C1a cleavage of a colorimetric peptide substrate, N Carbobenzyloxy-Lys-ThioBenzyl ester (Z-K-SBzl). The expected IC_{50} is ? 2.6 nM.

Endotoxin

Endotoxin level is <0.1 ng/µg of protein (<1EU/µg).

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.

Storage, Stability/Shelf Life

-20°C

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