TECHNICAL DATA SHEET

# Recombinant Human C1 Inhibitor (Carrier-free)

Catalog Number: 21-7138

## RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

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Recombinant Human C1 Inhibitor (Carrier-free)

### DESCRIPTION

C1 Inhibitor, a highly glycosylated protein, is a serine protease inhibitor belonging to the serpin superfamily. It regulates the immune complement system by acting as a protease inhibitor within the C1 complex, binding the C1r and C1s proteases. It also inhibits the contact system proteases Kallikrein and factor XIIa. C1 inhibitor deficiency results in hereditary angioedema (HAE), and for certain types of the disease C1 inhibitor concentrate may be used therapeutically.

### MOLECULAR MASS

Recombinant Human C1 Inhibitor corresponds to amino acids 56 – 500 of the C1 inhibitor precursor, resulting in a molecular weight of 49.4 kDa. It retains functionality, based on its ability to inhibit the C1 complex. Due to glycoslyation, it migrates at 80-90 kDa under reducing conditions by SDS-PAGE gel analysis.

### AMINO ACID SEQUENCE

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 AAAASAISVARTLLVFEVQQ PFLFVLWDQQ HKFPVFMGRV YDPRA

| SOURCE | APPLICATIONS | PURITY | STORAGE |
|---|---|---|---|
| CHO cells | Bioassay | 95 % | -20°C |

### PROTEIN CONTENT

Verified by UV Spectroscopy and/or SDS-PAGE gel.

### ENDOTOXIN LEVEL

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

### AUTHENTICITY

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

### CROSS REACTIVITY

### BIOACTIVITY

Expected $IC_{50}$ is ≤ 2.6 nM and is measured by its ability to inhibit recombinant human complement component C1a cleavage of the N Carbobenzyloxy-Lys-ThioBenzyl ester (Z-K-SBzl) substrate.

### RESEARCH AREAS

Apoptosis, Inflammation, Immune System

### RECONSTITUTION

See Certificate of Analysis (COA) for lot specific reconstitution information.

### REFERENCES

Ravindran S, Schapira M and Patston PA. 2012. Int J Biomater. 2012: 212417.Davis AE III. 2004. Drug News Perspect. 17(7): 439-446. Cicardi M, Zingale L, Zanichelli A, Pappalardo E and Cicardi B. 2005. Springer Semin Immunopathol. 27(3): 286-298. Gigli I, Mason JW, Colman RW and Austen KF. 1970. J Immunol. 104(3): 574-581. Waytes AT, Rosen FM and Frank MM. 1996. N Engl J Med. 334(25): 1630-1534.