

Recombinant Human Cystatin-SN/CST1 Protein

Catalog No.: RP00100 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	1469	P01037

Tags

C-His

Synonyms

CST1

Product Information

Source	Purification
HEK293 cells	> 97% by SDS-PAGE.

Calculated MW	Observed MW
15.16 kDa	14-15 kDa

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

The cystatin superfamily encompasses proteins that contain multiple cystatin-like sequences. Some of the members are active cysteine protease inhibitors, while others have lost or perhaps never acquired this inhibitory activity. There are three inhibitory families in the superfamily, including the type 1 cystatins (stefins), type 2 cystatins and the kininogens. The type 2 cystatin proteins are a class of cysteine proteinase inhibitors found in a variety of human fluids and secretions, where they appear to provide protective functions. The cystatin locus on chromosome 20 contains the majority of the type 2 cystatin genes and pseudogenes. This gene is located in the cystatin locus and encodes a cysteine proteinase inhibitor found in saliva, tears, urine, and seminal fluid.

Basic Information

Description

Recombinant Human Cystatin-SN/CST1 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Trp21-Ser141) of human Cystatin SN/CST1 (Accession #NP_001889.2) fused with a 6×His tag at the C-terminus.

Bio-Activity

Measured by its ability to inhibit active Cathepsin L cleavage of a fluorogenic peptide substrate Z-LR-AMC. The IC50 value is <11.0 nM.

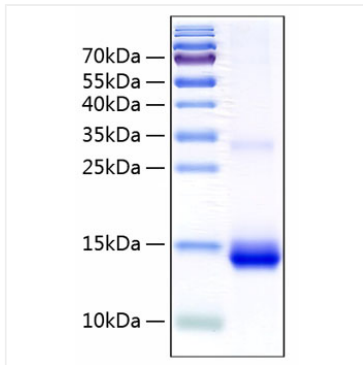
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

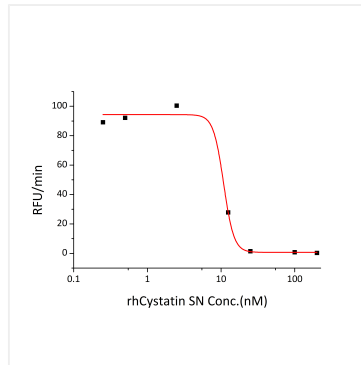
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Human Cystatin-SN/CST1 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 14-15 kDa.



Recombinant human CST1 inhibits active Cathepsin L cleavage of a fluorogenic peptide substrate Z-LR-AMC (Catalog # ES008). The IC₅₀ value is <math><11.0\text{ nM}</math>.