

Recombinant Human Cystatin-A/CSTA Protein

Catalog No.: RP00043 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	1475	P01040

Tags

C-His

Synonyms

CSTA;AREI;PSS4;STF1;STFA

Product Information

Source	Purification
<i>E. coli</i>	> 95% by SDS-PAGE.

Calculated MW	Observed MW
11.85 kDa	14 kDa

Endotoxin

< 1.0 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of 20mM Tris, 150mM NaCl, pH 8.0. 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.

Contact

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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 kininogens. This gene encodes a stefin that functions as a cysteine protease inhibitor, forming tight complexes with papain and the cathepsins B, H, and L. The protein is one of the precursor proteins of cornified cell envelope in keratinocytes and plays a role in epidermal development and maintenance. Stefins have been proposed as prognostic and diagnostic tools for cancer.

Basic Information

Description

Recombinant Human Cystatin-A/CSTA Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Met1-Phe98) of human Cystatin-A (Accession #NP_005204.1) fused with a 6xHis tag at the C-terminus.

Bio-Activity

Measured by its ability to inhibit papain cleavage of a fluorogenic peptide substrate Z-FR-AMC. The IC50 value is <0.7 nM.

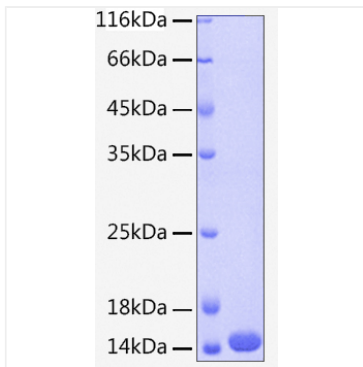
Storage

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

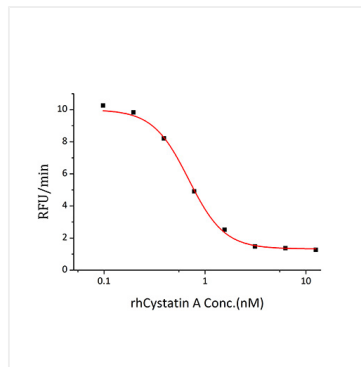
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



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



Recombinant Human OSM inhibits papain cleavage of a fluorogenic peptide substrate Z-FR-AMC. The IC50 value is <math><0.7\text{ nM}</math>.