

# Recombinant Human Cystatin-M/CST6 Protein

Catalog No.: RP00236 **Recombinant**

## Sequence Information

<b>Species</b>	<b>Gene ID</b>	<b>Swiss Prot</b>
Human	1474	Q15828

### Tags

C-His

### Synonyms

CST6

## Product Information

<b>Source</b>	<b>Purification</b>
HEK293 cells	> 95% by SDS-PAGE.

<b>Calculated MW</b>	<b>Observed MW</b>
14.43 kDa	15, 17 kDa

### Endotoxin

< 0.01 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.

## Contact

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## Background

Cystatin E/M encoded by the CST6 gene is a member of family 2 of the cystatin superfamily. It inhibits papain and cathepsin B, two of the cysteine proteases. Its mRNA was found in many tissues by the two groups who did initial cloning. However, its protein was found only in skin and sweat glands by a third group. In addition to being a cysteine protease inhibitor, cystatin E/M is also a substrate for transglutaminases. It is required for viability and for correct formation of cornified layers in the epidermis and hair follicles, as *ichq* mice, with a null mutation in the cystatin E/M gene, have defects in epidermal cornification and die between 5 and 12 days of age. Cystatin E/M expression and function may not be limited to cutaneous epithelia. For example, it is found in rat brain and is induced during neuronal cell differentiation.

## Basic Information

### Description

Recombinant Human Cystatin-M/CST6 Protein is produced by HEK293 expression system. The target protein is expressed with sequence (Arg29-Met149) of human CST6 (Accession #NP\_001314.1) 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 approximately 16 nM.

### Storage

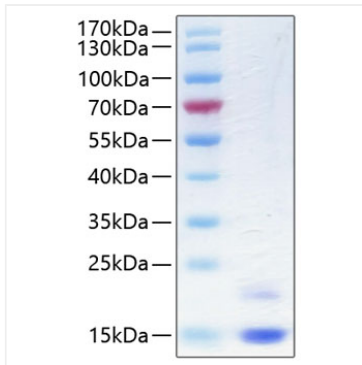
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

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

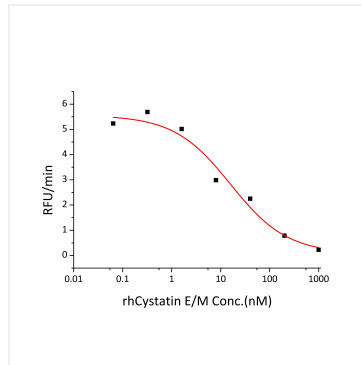
Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Human Cystatin-M/CST6  
Protein was determined by SDS-PAGE with  
Coomassie Blue, showing bands at 15&17  
kDa.



Recombinant Human CST6 inhibits papain  
cleavage of a fluorogenic peptide substrate  
Z-FR-AMC (Catalog # ES009). The IC<sub>50</sub> value  
is approximately 16nM.