

## Cystatin C Human (Human urine)

### Product Data Sheet

**Type:** Native

**Source:** Human urine

**Species:** Human

**Other names:** Post G-globulin, Cystatin-3, Neuroendocrine basic polypeptide, Gamma-trace, Post-gamma-globulin, CST3

**Cat. No.:**

RD172009100 (0.1 mg)

### Description

Native protein isolated from human urine.

### Introduction to the Molecule

Cystatin C is a non-glycosylated basic single-chain protein consisting of 120 amino acids with a molecular weight of 13.36 kDa and is characterized by two disulfide bonds in the carboxy-terminal region. It belongs to the cystatins superfamily which inactivates lysosomal cysteine proteinases, e.g. cathepsin B, H, K, L and S. Imbalance between Cystatin C and cysteine proteinases is associated with inflammation, renal failure, cancer, Alzheimer's disease, multiple sclerosis and hereditary Cystatin C amyloid angiopathy. Its increased level has been found in patients with autoimmune diseases, with colorectal tumors and in patients on dialysis. Serum Cystatin C seems to be better marker of glomerular filtration rate than creatinine. On the other hand, low concentration of Cystatin C presents a risk factor for secondary cardiovascular events.

### Research topic

Neural tissue markers, Renal disease

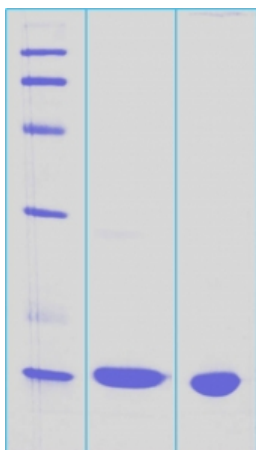
### Source

Human urine

### Purity

Purity as determined by densitometric image analysis: >96%

### SDS-PAGE gel



12% SDS-PAGE separation of Human Cystatin C

1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa

2. reduced and heated sample, 5µg/lane

3. non-reduced and non-heated sample, 5µg/lane

### Endotoxin

< 1.0 EU/ug

### Formulation

Filtered (0,4 µm) and lyophilised from 0.6 mg/mL in 20mM  $\text{NH}_4\text{HCO}_3$  with traces of buffer salts.

### Reconstitution

Add 20mM  $\text{NH}_4\text{HCO}_3$  to prepare a working stock solution of approximately 0.5 mg/mL. Product is not sterile! Please filter the

product by an appropriate sterile filter before using it in the cell culture.

### Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

### Storage, Stability/Shelf Life

Store lyophilized protein at -20°C. Lyophilized protein remains stable until the expiry date when stored at -20°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C.

### Quality Control Test

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

LAL to determine quantity of endotoxin.

### Applications

ELISA, Western blotting

### Note

This product is intended for research use only. All starting material used for purification was tested and found negative for HIV 1 and 2 antibodies, Hepatitis B surface antigen and HCV antibodies.

### References to this Product

- Abdul-Hussien H, Soekhoe RG, Weber E, von der Thusen JH, Kleemann R, Mulder A, van Bockel JH, Hanemaaijer R, Lindeman JH. *Collagen degradation in the abdominal aneurysm: a conspiracy of matrix metalloproteinase and cysteine collagenases*. Am J Pathol. 2007 Mar;170 (3):809-17
- Kaseda R, Iino N, Hosojima M, Takeda T, Hosaka K, Kobayashi A, Yamamoto K, Suzuki A, Kasai A, Suzuki Y, Gejyo F, Saito A . *Megalin-mediated endocytosis of cystatin C in proximal tubule cells*. [Biochem Biophys Res Commun](#) . Jun 15;357(4):1130-4 (2007)

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