

## PRODUCT DATASHEET

### Cystatin C Human E. coli

**Cat. No.:** RD172009100-H

**Type:** Recombinant protein

**Size:** 0.1 mg

**Source:** E. coli

**Species:** Human

#### Description

Total 129 AA. Mw: 14.5 kDa (calculated). UniProtKB acc.no. P01034. N-terminal His-tag, 9 extra AA (highlighted).

#### Other names

Post G-globulin, Cystatin-3, Neuroendocrine basic polypeptide, Gamma-trace, Post-gamma-globulin, CST3

#### 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

Animal studies, Neural tissue markers, Renal disease

#### Amino Acid sequence

MKHHHHHHAS SPGKPPRLVG GPMDASVEEE GVRRALDFAV GEYNKASNDM YHSRALQVVR ARKQIVAGVN YFLDVELGRT TCTKTQPNLD  
NCPFHDQPHL KRKAFCFSFI YAVPWQGTMT LSKSTCQDA

#### Purity

Purity as determined by densitometric image analysis: >95%

#### Endotoxin

< 0.1 EU/μg

#### Formulation:

Filtered (0,4 μm) and lyophilized from 0.5 mg/mL in 20mM Tris buffer, 50 mM NaCl, pH 7.5

#### Reconstitution:

Add deionized water to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely. Filter sterilize your culture media/working solutions containing this non-sterile product before using in cell culture.

#### Shipping

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

**Storage, Stability/Shelf Life**

Store the lyophilized protein at  $-80^{\circ}\text{C}$ . Lyophilized protein remains stable until the expiry date when stored at  $-80^{\circ}\text{C}$ . Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at  $-80^{\circ}\text{C}$  for long term storage. Reconstituted protein can be stored at  $4^{\circ}\text{C}$  for a limited period of time; however it does show trace of degradation (below 5% of total product) after one week at  $4^{\circ}\text{C}$ .

**Quality control**

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

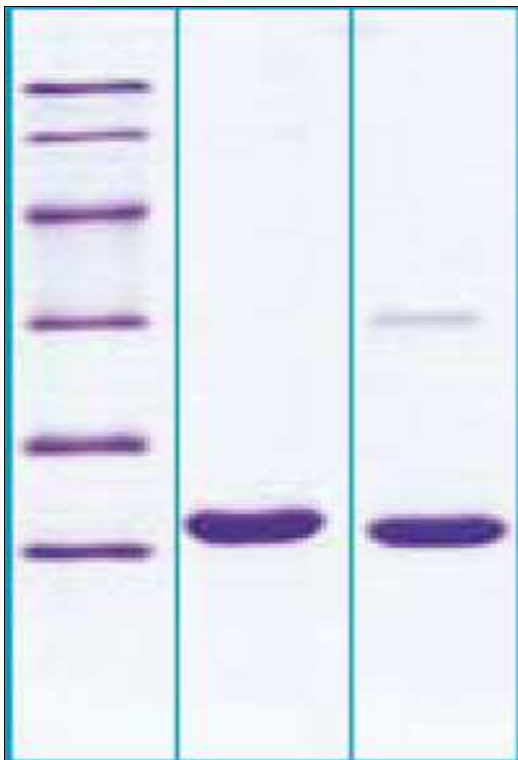
LAL to determine quantity of endotoxin.

**Applications**

ELISA, Western blotting

**Note**

This product is intended for research use only.



12% SDS-PAGE separation of Human Cystatin C  
1. M.W. marker – 14, 21, 31, 45, 66, 97 kDa  
2. reduced and heated sample, 2.5µg/lane  
3. non-reduced and non-heated sample, 2.5µg/lane