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

Description
Native protein isolated from human urine.

Introduction to the Molecule
Cystatin C is a non-glycosilated 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/µg

Formulation
Filtered (0.4 µm)) and lyophilised from 0.6 mg/mL in 20mM NH₄HCO₃ with traces of buffer salts.

Reconstitution
Add 20mM NH₄HCO₃ 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**