

## Cystatin C/CST3 Protein, Human (HEK293, C-His)

<b>Cat. No.:</b>	HY-P7865A
<b>Synonyms:</b>	rHuCystatin-C/CST3, His; Cystatin-C; Cystatin-3; Gamma-trace; Neuroendocrine basic polypeptide; Post-gamma-globulin; CST3
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P01034 (S27-A146)
<b>Gene ID:</b>	1471
<b>Molecular Weight:</b>	15-17 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>S S P G K P P R L V    G G P M D A S V E E    E G V R R A L D F A    V G E Y N K A S N D</p> <p>M Y H S R A L Q V V    R A R K Q I V A G V    N Y F L D V E L G R    T T C T K T Q P N L</p> <p>D N C P F H D Q P H    L K R K A F C S F Q    I Y A V P W Q G T M    T L S K S T C Q D A</p>
<b>Biological Activity</b>	Measured by its ability to inhibit papain cleavage of a fluorogenic peptide substrate Z-FR-AMC. The IC <sub>50</sub> value is 91.68 nM.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<p>The Cystatin C/CST3 protein serves a crucial physiological role as an inhibitor of cysteine proteinases, acting as a local regulator of their enzyme activity. It is known to capture and bind free plasma hemoglobin, preventing kidney damage and enabling the hepatic recycling of heme iron. In cases of hemolysis, where hemoglobin can accumulate in the kidneys and be secreted in urine, Cystatin C/CST3 plays a vital role in clearing the complexes formed between hemoglobin and Haptoglobin. Additionally, Cystatin C/CST3 acts as an antioxidant, exhibits antibacterial activity, and contributes to modulating various aspects of the acute phase response. The protein's homodimeric structure further enhances its functionality and effectiveness as an enzyme inhibitor.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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