

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

Cat. No.:	HY-P72688
Synonyms:	Cystatin-C; Cystatin-3; CST3
Species:	Human
Source:	HEK293
Accession:	P01034 (S27-A146)
Gene ID:	1471
Molecular Weight:	Approximately 15 kDa

### PROPERTIES

AA Sequence	<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>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 10 mM PB, 200 mM NaCl, pH 6.5.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	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).
Storage & Stability	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.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	<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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