

## Cystatin SN/CST1 Protein, Human (121a.a, HEK293, C-His)

<b>Cat. No.:</b>	HY-P7867A
<b>Synonyms:</b>	rHuCystatin-SN/CST1, His; Cystatin-SN; Cystatin-SA-I; Cystatin-1; Salivary Cystatin-SA-1; CST1
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P01037 (W21-S141)
<b>Gene ID:</b>	1469
<b>Molecular Weight:</b>	Approximately 16 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>W S P K E E D R I I      P G G I Y N A D L N      D E W V Q R A L H F      A I S E Y N K A T K</p> <p>D D Y Y R R P L R V      L R A R Q Q T V G G      V N Y F F D V E V G      R T I C T K S Q P N</p> <p>L D T C A F H E Q P      E L Q K K Q L C S F      E I Y E V P W E N R      R S L V K S R C Q E</p> <p>S</p>
<b>Biological Activity</b>	Measured in a cytotoxicity assay using A549 human non-small-cell lung carcinoma cells. The ED <sub>50</sub> this effect is 0.4193 ng/mL, corresponding to a specific activity is 2.3849×10 <sup>6</sup> units/mg.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 μm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, 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>Cystatin SN (CST1), a component of human saliva, belongs to the cysteine proteinase inhibitor family, sharing immunological similarity with cystatin S. Despite this similarity, Cystatin SN exhibits distinct specificity due to amino acid sequence variations. With a pI of 7.5, Cystatin SN stands out as a potent inhibitor of papain and dipeptidyl peptidase I, outperforming cystatin S in these inhibitory activities. Notably, both Cystatin SN and cystatin S demonstrate equal proficiency in inhibiting ficin. This highlights the intricate variations in the inhibitory capabilities within the cystatin family</p>
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present in saliva, emphasizing their potential roles in regulating specific proteolytic activities.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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