

Human Cystatin S / CST4 Protein (His Tag)

Catalog Number: 11542-H08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

CST4; MGC71923

Protein Construction:

A DNA sequence encoding the human CST4 (NP_001890.1) (Met 1-Ala 141) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 98 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ser 21

Molecular Mass:

The secreted recombinant human CST4 consists of 132 amino acids and migrates as an approximately 16 kDa band in SDS-PAGE under reducing conditions as predicted.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

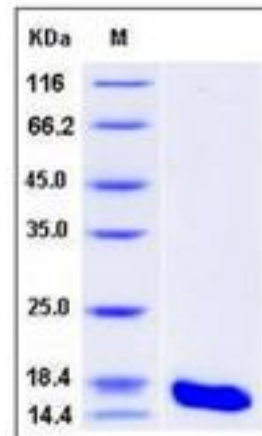
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Cystatin-S, also known as Cystatin-4, Salivary acidic protein 1, Cystatin-SA-III and CST4, is a secreted protein which belongs to the cystatin family. Cystatin-4 / CST4 is expressed in submandibular and sublingual saliva but not in parotid saliva (at protein level). It is also expressed in saliva, tears, urine and seminal fluid. The cystatin superfamily encompasses proteins that contain multiple cystatin-like sequences. Some of the members are active cysteine protease inhibitors, while others have lost or perhaps never acquired this inhibitory activity. There are three inhibitory families in the superfamily, including the type 1 cystatins (stefins), type 2 cystatins and the kininogens. The type 2 cystatin proteins are a class of cysteine proteinase inhibitors found in a variety of human fluids and secretions. Cystatin-4 / CST4 strongly inhibits papain and ficin, partially inhibits stem bromelain and bovine cathepsin C, but does not inhibit porcine cathepsin B or clostripain. Papain is inhibited non-competitively. Cystatin-4 / CST4 is an S-type cystatin, based on its high level of expression in saliva, tears and seminal plasma. The specific role in these fluids is unclear but antibacterial and antiviral activity is present, consistent with a protective function.

References

1. Bobek L.A., *et al.*, (1991), Human salivary cystatin S. Cloning, sequence analysis, hybridization in situ and immunocytochemistry. *Biochem. J.* 278:627-635.
2. Saitoh E., *et al.*, (1992), Characterization of two members (CST4 and CST5) of the cystatin gene family and molecular evolution of cystatin genes. *Agents Actions* 38:340-348.
3. Deloukas P., *et al.*, (2001), The DNA sequence and comparative analysis of human chromosome 20. *Nature* 414:865-871.

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