

Human Cystatin 7 / CST7 Protein (Fc Tag)

Catalog Number: 10167-H02H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

CMAF; Cmap

Protein Construction:

A DNA sequence encoding the human Cystatin F precursor (NP_003641.3) (Met 1-His 145) was expressed with the fused Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to inhibit active Cathepsin L cleavage of a fluorogenic peptide substrate Z-LR-AMC (R&D Systems, Catalog#ES008). The IC50 value is

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: Gly 20

Molecular Mass:

The recombinant human Cystatin-F/Fc is a disulfide-linked homodimeric protein. The reduced monomer consists of 364 amino acids and predicts a molecular mass of 41.3 kDa. As a result of glycosylation, the rh Cystatin-F/Fc monomer migrates as an approximately 50 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 100mM Glycine, 10mM NaCl, 50mM Tris, pH 7.5

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:

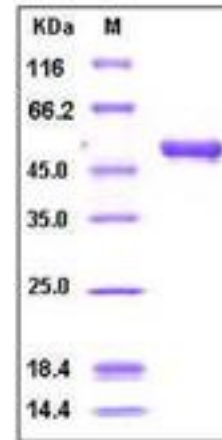
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

The cystatin superfamily members are important natural cysteine protease inhibitors present in a wide variety of organisms and are divided into three classes. Cystatin F, also known as leukocystatin and CMAF (Cystatin-like Metastasis-Associated Protein), is a type 2 cystatin and its expression is limited to hematopoietic cells, with the highest expression levels being observed in monocytes, dendritic cells, and certain types of T-cells. Furthermore, cystatin F mRNA becomes up-regulated during dendritic cell maturation, and thus suggests a specific role of cystatin F in immune regulation. Cystatin F is produced as a dimer, an inactive cathepsin inhibitor which is activated by chemical reduction. In addition, Cystatin F and its homologues have been observed expressing in various human cancer cell lines established from malignant tumors, and thus indicates a new diagnosis and prevention approach of certain human carcinomas metastasis.

References

1. Halfon S., *et al.*, (1998), Leukocystatin, a new class II cystatin expressed selectively by hematopoietic cells. J. Biol. Chem. 273:16400-16408.
2. Ni J., *et al.*, (1998), Cystatin F is a glycosylated human low molecular weight cysteine proteinase inhibitor. J. Biol. Chem. 273:24797-24804.
3. Morita M., *et al.*, (2000), Genomic construct and mapping of the gene for CMAF (leukocystatin/cystatin F, CST7) and identification of a proximal novel gene, BSCv (C20orf3). Genomics 67:87-91.

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