

Product Information

Cystatin from chicken egg white

Catalog Number **C8917**
Storage Temperature 2–8 °C

CAS RN 81989-95-9

Product Description

Molecular mass:¹ 13 kDa
pI:² 5.6 and 6.5

Cystatin is a cysteine protease inhibitor isolated from chicken egg white. It inhibits the cysteine proteases papain and ficin, but does not inhibit bromelain. Cystatin also inhibits Cathepsin B, cathepsin H, cathepsin L, and dipeptidylpeptidase I. One molecule of cystatin will bind to one molecule of ficin, papain, or cathepsin B.^{1,2}

Protease	K _i
Papain	1.5×10^{-9} M
Ficin	1.5×10^{-8} M
Cathepsin B	8×10^{-10} M
Cathepsin H	2×10^{-8} M
Cathepsin L	3×10^{-12} M
Dipeptidylpeptidase	2×10^{-10} M

Cystatin is not a glycoprotein and contains two disulfide bridges. It does not contain a free thiol group and there is no indication the inhibition mechanism is based upon a disulfide exchange. The concentration of cystatin in chicken egg whites is ~60 µg/ml and it is present at a concentration of 1 µg/ml in chicken serum (both male and female chickens).^{1,2}

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

This product is soluble in PBS (1 mg/ml), yielding a clear solution.

Storage/Stability

Stock solutions of cystatin in the presence of sufficient glycerol or sucrose to prevent freezing are stable when stored at –20 °C.¹

References

1. Barret, A.J., Meth. Enzymol., **80**, 771-778 (1981).
2. Anatasi, A., Cystatin, a protein inhibitor of cysteine proteinases. Improved purification from egg white, characterization, and detection in chicken serum. Biochem. J., **211**, 129-138 (1983).

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