

Recombinant Human Cystatin A (stefin A)

DOBIO目录号: DBS087

Background:

Human Cystatin A (CSTA 1) also called stefin A, Cystatin AS or keratolinin, is a member of family 1 of the cystatin superfamily, which is characterized by lacking of disulphide bonds and carbohydrates. Cystatin A/Stefin A is an intracellular inhibitor regulating the activities of cysteine proteases of the papain family such as Cathepsins B, H and L. Cystatin A is also implicated in a number of disease states. Due to altered proteolytic state in cancer progression, Cystatin A may play a role in the proteolytic pathways.

Description:

Recombinant Human Cystatin A produced in E. coli is a non-glycosylated polypeptide chain consisting of 98 amino acid residue with an N-terminal Met and having a molecular mass of 11kDa.

Quality Control:

Biological activity: The IC₅₀ value is < 3.4 nM, as measured by its ability to inhibit papain cleavage of a fluorogenic peptide substrate.

Purity: Greater than 98.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

Amino-Acid Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Met-Ile-Pro-Gly-Gly.

Endotoxin: Less than 0.1ng/μg (1.0EU/μg) of hCSTA1 as determined by LAL test.

Formulation:

Sterile and Lyophilized aliquots with a 0.2μm filtered protein solution containing 50mM Tris pH7.5, 100mM NaCl.

Reconstitution:

It is recommended to reconstitute the lyophilized rHuCSTA1 in sterile buffer 50mM Tris pH7.5, 100mM NaCl with a concentration no less than 100μg/ml, which can then be further diluted to other solutions.

Storage:

Lyophilized rHuCSTA1 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C, which is stable for up to twelve months from date of receipt. Upon reconstitution rHuCSTA1 should be stored at 4°C between 2-7 days and aliquots of reconstituted samples are stable up to 3 months below -18°C for future use.

Please avoid freeze-thaw cycles.