

## Active Recombinant Human CSTA protein, His-tagged

**Cat. No.** CSTA-203H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant human CSTA protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.                                                                                                                                                                                                                                                                                            |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description</b>      | CSTA, also known as Stefin A, is thiol protease inhibitors that form complexes with papain and the cathepsins B, H and L. The protein is one of the precursor proteins of the cornified cell envelope in keratinocytes and plays a role in epidermal development and maintenance. CSTA is thought to be a tumor suppressor, since an inverse correlation seems to exist between the level of CSTA and tumor progression, in several malignancies |
| <b>Form</b>             | Liquid. In 20 mM Tris-HCl buffer (pH8.0) containing 1mM DTT, 10% glycerol                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Bio-activity</b>     | The IC <sub>50</sub> value is < 1.0nM. The inhibitory function of Cystatin A on protease activity of papain was measured by a fluorometric assay using Z-FR-AMC at pH 7.5 at 25C.                                                                                                                                                                                                                                                                |
| <b>Molecular Mass</b>   | 13.1 kDa (118aa) confirmed by MALDI-TOF                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>AA Sequence</b>      | MGSSHHHHHH SSGLVPRGSH MIPGGLSEAK PATPEIQEIV DKVKPQLEEK<br>TNETYGKLEA VQYKTQVVAG TNYYIKVRAG DNKYMHLKVKFSPLPGQNEDL<br>VLTGYQVDKN KDDELTGF                                                                                                                                                                                                                                                                                                          |

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|                            |                                                                                                                                                                                  |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>              | > 95% by SDS - PAGE                                                                                                                                                              |
| <b>Storage</b>             | Can be stored at +4 centigrade short term (1-2 weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoid repeated freezing and thawing cycles. |
| <b>Concentration</b>       | 1 mg/ml (determined by BCA assay)                                                                                                                                                |
| <b>GENE INFORMATION</b>    |                                                                                                                                                                                  |
| <b>Gene Name</b>           | CSTA cystatin A (stefin A) [ Homo sapiens ]                                                                                                                                      |
| <b>Official Symbol</b>     | CSTA                                                                                                                                                                             |
| <b>Synonyms</b>            | CSTA; cystatin A (stefin A); STF1; STFA; CSTA; Cystatin-A; Cystatin-AS; cystatin A; cystatin AS; stefin A                                                                        |
| <b>Gene ID</b>             | 1475                                                                                                                                                                             |
| <b>mRNA Refseq</b>         | NM_005213                                                                                                                                                                        |
| <b>Protein Refseq</b>      | NP_005204                                                                                                                                                                        |
| <b>MIM</b>                 | 184600                                                                                                                                                                           |
| <b>UniProt ID</b>          | P01040                                                                                                                                                                           |
| <b>Chromosome Location</b> | 3q21                                                                                                                                                                             |
| <b>Function</b>            | cysteine-type endopeptidase inhibitor activity; protease binding; protein binding, bridging; structural molecule activity                                                        |

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