

Active Recombinant Mouse Csta1 protein, His-GST-tagged

Cat. No. Csta1-2671M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Mouse Csta1 protein(P56567)(1~97 aa), fused with N-terminal His tag and GST tag, was expressed in E.coli.
Species	Mouse
Source	E.coli
ProteinLength	1-97 aa
Form	Lyophilized from sterile PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Bio-activity	Cystatin A (CSTA) is a member of family 1 of the cystatin superfamily. Like Cystatin B, it is an intracellular inhibitor regulating the activities of cysteine proteases of the papain family such as cathepsins B, H and L. For example, immunohistochemical analysis of Cystatin A and cathepsin L is a useful indicator for malignancy in human epidermal keratinocytes. The ratio of cathepsin B and Cystatin A can be used in the differential diagnosis and treatment of patients with prostate carcinoma. The activity of recombinant mouse Cystatin A was measured by its ability to inhibit papain cleavage of a fluorogenic peptide substrate Z-FR-AMC in the assay buffer 50 mM Tris, pH 7.0. Papain was diluted to 500 ug/ml in activation buffer 50 mM Tris, 5 mM DTT, pH 7.0 and incubated at room temperature for 15 minutes. The activated papain was diluted to 100 ug/ml in the assay buffer and 20 ul different concentrations of recombinant mouse Cystatin A (MW: 40.9 KD) was incubated with 20 ul 100 ug/ml

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papain at 37°C for 10 minutes. Loading 50 μ of the incubated mixtures which were diluted five-fold in assay buffer into empty wells of a plate, and start the reaction by adding 50 μ of 200 μ M substrate. Include a substrate blank containing 50 μ of assay buffer and 50 μ of 200 μ M substrate. Then read at excitation and emission wavelengths of 380 nm and 460 nm, respectively, in kinetic mode for 5 minutes. The result was shown and it was obvious that recombinant mouse Cystatin A significantly decreased papain activity. The inhibition IC₅₀ was <130 nM.

Molecular Mass	40.0kDa
Endotoxin	<1.0EU per 1 μ g (determined by the LAL method).
Purity	> 90% as determined by SDS-PAGE.
Storage	Avoid repeated freeze/thaw cycles. Store at -20°C for 12 months. Aliquot and store at -80°C for 12 months.
Reconstitution	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.