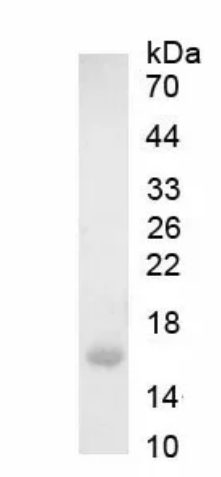
Active Cystatin C (Cys-C)

Catalog#:PHR12556

概述（Summary）

别称（Alternative Names）	CST3; Cystatin 3; Gamma Trace; Post-Gamma-Globulin; Neuroendocrine Basic Polypeptide; Amyloid Angiopathy And Cerebral Hemorrhage
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Gly21-Ala140】
Accession #	P14841
表达宿主（Host）	293F
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	14.9 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	As an inhibitor of cysteine proteinases, this protein is thought to serve an important physiological role as a local regulator of this enzyme activity. Known to inhibit cathepsin B, H, and L.

电泳图（SDS-PAGE image）



Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

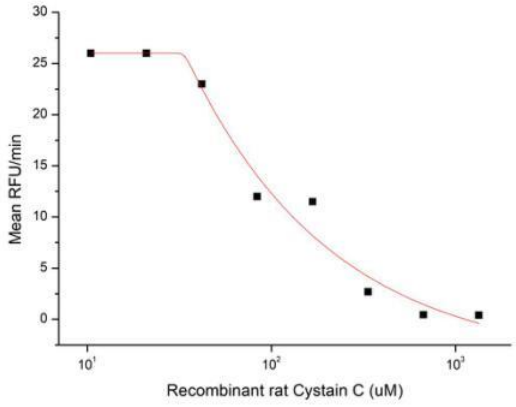


Figure 1. Inhibition of papain activity by recombinant rat Cys-C

Cystatin C is a member of family 2 of the Cystatin superfamily. It is involved in processes such as tumor invasion and metastasis, inflammation and some neurological diseases. It inhibits many cysteine proteases such as papain and cathepsins B, H, K, L and S. It is ubiquitous in human tissues and body fluids. A point mutation in the gene coding for the 120 amino acid mature Cystatin C causes a hereditary form of amyloid angiopathy in which the protein variant (Leu68 to Gln) is deposited in the cerebral arteries, leading to fatal cerebral hemorrhage. Cystatin C may have additional clinical applications. For example, it is a good marker for glomerular filtration rate. The activity of recombinant rat Cystatin C 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 rat Cystatin C (MW: 14.93 KD) was incubated with 20 ul 100 ug/ml papain at 37 ℃ for 10 minutes. Loading 50 µL 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 µL of 200 µM substrate. Include a substrate blank containing 50 µL of assay buffer and 50 µL of 200 µM substrate. Then read at excitiation and emission wavelengths of 380 nm and 460 nm, respectively, in kinetic mode for 5 minutes. The result was shown in Figure 1 and it was obvious that recombinant rat Cystatin C significantly decreased papain activity. The inhibition IC50 was <80 nM.

注意事项（Note）

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