

RP00181

Leader in Biomolecular Solutions for Life Science



# Recombinant Human Cathepsin S Protein

Catalog No.: RP00181

Recombinant

## Sequence Information

Species	Gene ID	Swiss Prot
HEK293 cells	1520	P25774

### Tags

C-His

### Synonyms

CTSS

## Product Information

### Source

HEK293 cells

### Purification

≥ 95 % as determined by SDS-PAGE.

### Endotoxin

< 0.1 EU/μg of the protein by LAL method.

### Formulation

Lyophilized from a 0.22 μm filtered solution of 50mM MES, 100mM NaCl, pH6.5. Contact us for customized product form or formulation.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact



[www.abclonal.com](http://www.abclonal.com)

## Background

Cathepsin S (CTSS), one of the lysosomal proteinases, has many important physiological functions in the nervous system, especially in process of extracellular matrix degradation and endocellular antigen presentation. Cathepsin S is expressed in the lysosome of antigen presenting cells, primarily dendritic cells, B-cells and macrophages. Cathepsin S is most well known for its critical function in the proteolytic digestion of the invariant chain chaperone molecules, thus controlling antigen presentation to CD4+ T-cells by major histocompatibility complex (MHC) class II molecules or to NK1.1+ T-cells via CD1 molecules. Cathepsin S also appears to participate in direct processing of exogenous antigens for presentation by MHC class II to CD4+ T-cells, or in cross-presentation by MHC class I molecules to CD8+ T-cells. In addition, it has been implicated in the pathogenesis of several diseases such as Alzheimer's disease and degenerative disorders associated with the cells of the mononuclear phagocytic system.

## Basic Information

### Description

Recombinant Human Cathepsin S Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gln17-Ile331) of human Cathepsin S/CTSS (Accession #NP\_004070.3) fused with an 8×His tag at the C-terminus.

### Bio-Activity

Measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH<sub>2</sub>. The specific activity is >1390 pmol/min/μg.

### Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

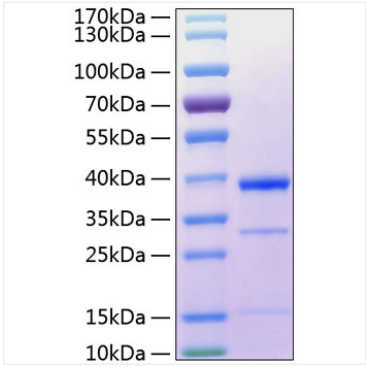
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

\* For your safety and health, please wear a lab coat and disposable gloves when handling.

## Validation Data

---



Recombinant Human Cathepsin S Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.