

Recombinant Human Cathepsin S Protein

Catalog No.: RP00181 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	1520	P25774

Tags

C-His

Synonyms

CTSS

Product Information

Source	Purification
HEK293 cells	> 95% 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 freeze-thaw cycles.

Contact

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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)-NH₂. The specific activity is >1390 pmol/min/μg.

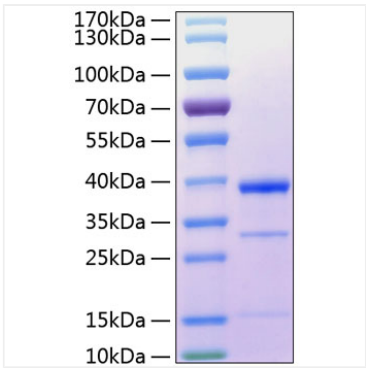
Storage

Store the lyophilized protein at -20°C to -80 °C for long term.

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.

Validation Data



Recombinant Human Cathepsin S Protein was determined by SDS-PAGE with Coomassie Blue, showing bands at 37 kDa and 26 kDa..