

Recombinant Mouse Cathepsin S/CTSS Protein

Catalog No.: RP01605 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Mouse	13040	O70370

Tags

C-His

Synonyms

Cathepsin S; Ctss; Cats;CTSS

Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

Calculated MW	Observed MW
37.28 kDa	35-45 kDa

Endotoxin

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

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

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.

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 Mouse Cathepsin S/CTSS Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Val18-Ile340) of mouse Cathepsin S/CTSS (Accession #NP_067256.4) fused with and a 6×His tag at the C-terminus.

Bio-Activity

Measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPKPVE- Nval-WRK(Dnp)-NH₂ (RD,Catalog # ES002). The specific activity is >212 pmol/ min/μg, as measured under the described conditions.

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.

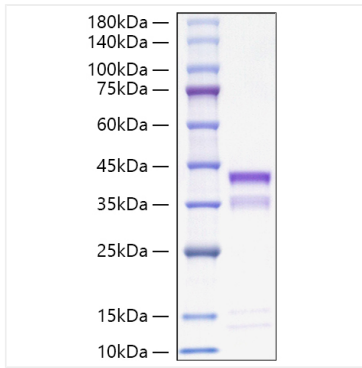
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Validation Data



Recombinant Mouse Cathepsin S/CTSS
Protein was determined by SDS-PAGE with
Coomassie Blue, showing a band at 33-38
kDa.