

Recombinant Mouse Cathepsin S/CTSS Protein

Catalog No.: RP01605

Sequence Information

Species **Gene ID**
Mouse 13040

Swiss Prot **Tags**
O70370 C-His

Synonyms

Cathepsin S; Ctss; Cats,CTSS

Product Information

Source **Purification**
HEK293 cells ≥ 95 % as
 determined 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.

Activity

Measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH₂ (RD, Catalog # ES002). The specific activity is >541 pmol/ min/μg, as measured under the described conditions.

Shipping

Lyophilized proteins are shipped at ambient temperature. Liquid proteins are shipped at frozen temperature with dry ice. Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

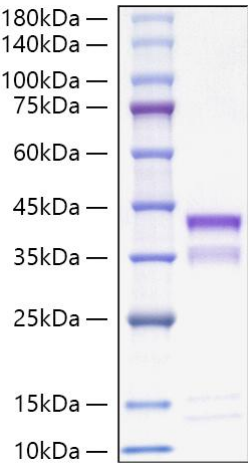
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Validation Data



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