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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
HEK293 cells

Purification
≥ 95 % as determined by SDS-PAGE.

Calculated MW
37.28 kDa

Observed MW
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 stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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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 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.

Shipping
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

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

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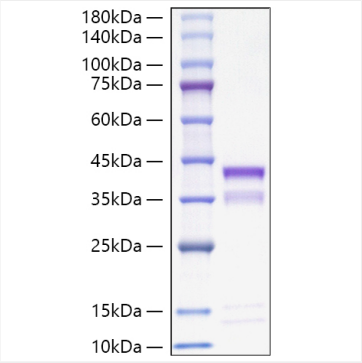
Validation Data



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

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