

Recombinant Human CTSS Protein (Leu115-Ile331), His tagged

Cat. No. CTSS-1893H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human CTSS (Leu115-Ile331) fused with His tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	Leu115-Ile331
Description	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. CTSS is synthesized as inactive precursor of 331 amino acids consisting of a 15-aa signal peptide, a propeptide of 99 aa, and a mature polypeptide of 217 aa. It is activated in the lysosomes by a proteolytic cleavage of the propeptide. Cathepsin S is expressed in the lysosome of antigen presenting cells, primarily dendritic cells, B-cells and macrophages. Compared with other lysosomal cysteine proteases, cathepsin S has displayed some unique characteristics. 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, although direct evidence is still lacking, in its secreted form

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cathepsin S is implicated in degradation of the extracellular matrix, which may contribute to the pathology of a number of diseases, including arthritis, atherosclerosis, neurological diseases and chronic obstructive pulmonary disease.

Form	Lyophilized powder/frozen liquid
Molecular Mass	25.5 kDa
Purity	>90% as determined by SDS-PAGE
Notes	For research use only.
Storage	Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 centigrade for one week. Store at -20 to -80 centigrade for twelve months from the date of receipt.
Storage Buffer	Supplied as solution form in PBS, pH 7.5 or lyophilized from PBS, pH 7.5.
Reconstitution	Reconstitute in sterile water for a stock solution.
Shipping	They are shipped out with dry ice/blue ice unless customers require otherwise.

GENE INFORMATION

Gene Name	CTSS cathepsin S [Homo sapiens (human)]
Official Symbol	CTSS
Synonyms	CTSS; cathepsin S; MGC3886; FLJ50259;
Gene ID	1520

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mRNA Refseq	NM_001199739
Protein Refseq	NP_001186668
MIM	116845
UniProt ID	P25774

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