

Recombinant Human Cathepsin L2, His-tagged

Cat. No. CTSL2-751H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human procathepsin V (amino acids 18-334) was fused at the N-terminus to a CD33 signal sequence (amino acids 1-16) and at the C-terminus to a His•Tag sequence and expressed in NSO cells. MW = 38.7 kDa.
Species	Human
Source	Mammalian Cells
Protein Length	18-334 a.a.
Description	Cathepsin L2, also known as CTSL2, Cathepsin V, CATL2, and CTSV, is a member of the peptidase C1 family. It is predominantly expressed in the thymus and testis. Cathepsin V is also expressed in corneal epithelium, and to a lesser extent in conjunctival epithelium and skin. Cathepsin V is a lysosomal cysteine proteinase that may play an important role in corneal physiology. It has about 75% protein sequence identity to murine cathepsin L. The fold of this enzyme is similar to the fold adopted by other members of the papain superfamily of cysteine proteases. Cathepsins K and S are papain-like cysteine proteases with known elastolytic activities, and both enzymes have been identified in macrophages present in plaque areas of diseased blood vessels. Cathepsin V is the third elastolytic cysteine protease which exhibits the most potent elastase activity yet described among human proteases and that Cathepsin V is present in atherosclerotic plaque specimens. Increase of cathepsins V and K activities may accelerate the destruction of the elastin matrix in diseased arteries.
Purity	≥95% by SDS-PAGE.

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Form	Frozen liquid. In 800 mM NaCl, 25 mM sodium acetate, 0.8 M NaCl, pH 5.0. Please refer to vial label for lot-specific concentration.
Endotoxins	≤1.0 EU/μg Cathepsin V.
Specific Activity	≥300 units/μg.
Unit Definition	One unit is defined as the amount of enzyme that will cleave 1 pmol the fluorescent substrate Z-LR-AMC per min at 25°C, pH 5.5.
Toxicity	Standard Handling (MSDS available upon request).
Storage	≤-70°C. Avoid freeze/thaw. To activate rhCathepsin V, pre-incubate it at 20 μg/ml in 25 mM NaOAc, 100 mM NaCl, 5 mM DTT, pH 5.5 at room temperature. Following initial thaw aliquot and freeze (-70°C).

GENE INFORMATION

Gene Name	CTSL2 cathepsin L2 [Homo sapiens]
Synonyms	CTSL2; cathepsin L2; CTSU; CTSV; CATL2; MGC125957; EC 3.4.22.43; Cathepsin L2; Cathepsin V; Cathepsin U; UNQ268/PRO305
Gene ID	1515
mRNA Refseq	NM_001333
Protein Refseq	NP_001324
MIM	603308

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UniProt ID	O60911
Chromosome Location	9q22.2
Pathway	Lysosome
Function	cysteine-type endopeptidase activity; peptidase activity; protein binding
PDB rendering based on 1fh0.	 