Recombinant Human CTSL, C13&N15-labeled

Cat. No. CTSL-227H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human CTSL1 MS Standard Protein, C13 and N15-labeled (CTSL1, Heavy Labeled) Thr 18 - Val 333 (Accession # NP_001903.1) was produced in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	18-333 a.a.
Description	Cathepsin L (CTSL1) also known as major excreted protein (MEP), is a member of the peptidase C1 family, is a dimer composed of disulfide-linked heavy and light chains linked by disulfide bonds. CTSL1 is a lysosomal cysteine proteinase that plays a major role in intracellular protein catabolism. Its substrates include collagen and elastin, as well as alpha-1 protease inhibitor, a major controlling element of neutrophil elastase activity. MEP has been implicated in several pathologic processes, including myofibril necrosis in myopathies and in myocardial ischemia, and in the renal tubular response to proteinuria. CTSL1 is important for the overall degradation of proteins in lysosomes. The specificity of MEP is close to that of papain. As compared to cathepsin B, cathepsin L exhibits higher activity toward protein substrates, but has little activity on Z - Arg – Arg – NHMec, and no peptidyl - dipeptidase activity. Human Cathepsin L activity is greatest under mildly acidic conditions, from pH 4.5 - 6.5. The stability of the enzyme decreases at higher pH values

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Form	Lyophilized from 0.22 μm filtered solution in 50 mM Sodium Acetate, pH 5.0 with 100 mM NaCl. Normally Mannitol or Trehalose are added as protectants before lyophilization.
Molecular Mass	CTSL1, Heavy Labeled, fused with 6×His tag at the C-terminus, has a calculated MW of 36.7 kDa. The predicted N-terminus is Thr 18 and Ala 114. DTT-reduced Protein migrates as 10 kDa and 34 kDa due to glycosylation,corresponding to the propeptide and the m
Endotoxin	Less than 1.0 EU per μg of the CTSL1, Heavy Labeled by the LAL method.
Purity	>98% as determined by SDS-PAGE.
Storage	Avoid repeated freeze-thaw cycles.No activity loss was observed after storage at:In lyophilized state for 1 year (4oC-8oC); After reconstitution under sterile conditions for 1 month (4oC-8oC) or 3 months (-20oC to -70oC).

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