

Human CellExp™ Cathepsin L1, human recombinant

CATALOG #: 7410-10 10 µg

ALTERNATE NAMES: CTSL1, MEP, CATL, CTSL

SOURCE: HEK 293 cells (Thr 18 – Val 333)

PURITY: ≥ 98% by SDS-PAGE gel

MOL. WEIGHT: This protein is fused with 6xHis 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 mature form respectively.

ENDOTOXIN LEVEL: <1 EU/µg by LAL method

FORM: Lyophilized

FORMULATION: Lyophilized from 0.22 µm filtered solution in 50 mM Sodium Acetate, pH 5.0 with 100 mM NaCl. Generally 5-8% Mannitol or trehalose is added as a protectant before lyophilization.

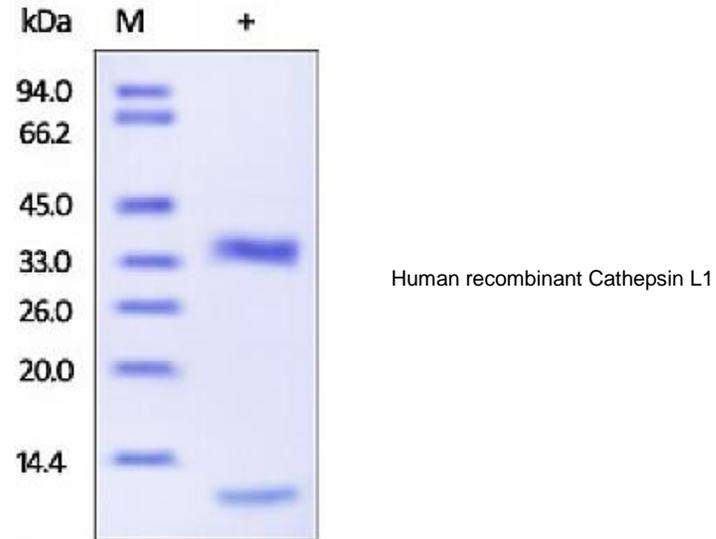
STORAGE CONDITIONS: Store at -20°C. After reconstitution, aliquot and store at -20°C and use within 3 months. Avoid repeated freezing and thawing cycles.

RECONSTITUTION: Centrifuge the vial prior to opening. Reconstitute in sterile PBS, pH 7.4 to a concentration of 50 µg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 month. For extended storage, it is recommended to store at -20°C.

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.

BIOLOGICAL ACTIVITY: Measured by its binding ability in a functional ELISA. Immobilized human CD74 at 5 µg/ml (100 µl/well) can bind biotinylated human CTSL1 with a linear range of 25 - 400 ng/ml.



RELATED PRODUCTS:

- Human CellExp™ Cathepsin B, human recombinant (**Cat. No. 7408-10**)
- Human CellExp™ Cathepsin D, human recombinant (**Cat. No. 7409-10**)
- Human CellExp™ Cathepsin S, human recombinant (**Cat. No. 7277-10, -50, -1000**)
- Cathepsin K, Active, human recombinant (**Cat. No. 7600-5, -50**)
- Cathepsin K, Active, mouse recombinant (**Cat. No. 7597-5, -50**)
- Cathepsin K, Active, rat recombinant (**Cat. No. 7598-5, -50**)
- Cathepsin B (active, human) (**Cat. No. 1021-5**)
- Cathepsin D (active, human) (**Cat. No. 1022-5**)
- Cathepsin H (active, human) (**Cat. No. 1023-5**)
- Cathepsin L, human recombinant (**Cat. No. 1135-5, 100, 1000**)
- Procathepsin K, human recombinant (**Cat. No. 1026-10, -50, -1000**)
- Procathepsin K, mouse recombinant (**Cat. No. 1027-10, -50, -1000**)
- Procathepsin K, rat recombinant (**Cat. No. 1029-10, -50, -1000**)

FOR RESEARCH USE ONLY! Not to be used in humans.