

Recombinant Human Cathepsin L/CTSL Protein (His Tag)



Catalog Number: PKSH031573

Note: Centrifuge before opening to ensure complete recovery of vial contents.

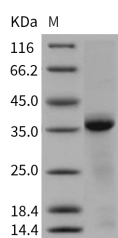
Description

Synonyms	Cathepsin L1; Major Excreted Protein; MEP; CTSL1; CTSL
Species	Human
Expression Host	HEK293 Cells
Sequence	Met 1-Val 333
Accession	NP_001903.1
Calculated Molecular Weight	37.3 kDa
Observed molecular weight	37 kDa
Tag	C-His
Bioactivity	Immobilized human CD74 at 5 µg/ml (100 µl/well) can bind biotinylated human CTSL1 with a linear range of 3. 2-400 ng/ml.

Properties

Purity	> 90 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 50mM NaAc, 0.1M NaCl, pH 5.0 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 90 % as determined by reducing SDS-PAGE.

Background

Cathepsin L is a lysosomal cysteine protease that plays a major role in intracellular protein catabolism, and is potent in degrading collagen, laminin, elastin, as well as alpha-1 protease inhibitor and other structural proteins of basement membranes. Like many proteases, Cathepsin L is synthesized as an inactive preproenzyme, and cleavage of the 96-residue proregion is necessary to generate the fully active 221-residue mature enzyme. Studies have demonstrated that cleavage of the proregion occur autocatalytically under acidic conditions. The enzyme takes part in nutrient acquisition by catabolizing host proteins to absorbable peptides, facilitates the migration of the parasite through the host intestine and

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liver by cleaving interstitial matrix proteins such as fibronectin, laminin and native collagen and is implicated in the inactivation of host immune defenses by cleaving immunoglobulins. Recently, Cathepsin L has been shown to suppress Th1 immune response in infected laboratory animals making them susceptible to concurrent bacterial infections. Cathepsin L is synthesized in large amounts and secreted by many malignantly transformed cells, and induced by growth factors and tumor promoters. In addition to its role in protein degradation, evidence has accumulated for the participation of Cathepsin L in various physiological and pathological processes, such as tumor invasion and metastasis, bone resorption, spermatogenesis, and arthritis. Accordingly, Cathepsin L may prove useful as a diagnostic or prognostic marker of human tumor malignancy.

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