

## Recombinant Mouse Cathepsin L, His-tagged

**Cat. No.** Ctsl-1129M    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <b>Product Overview</b> | A DNA sequence encoding the mouse CTSL ( P06797 ) ( Met 1-Asn 334) was expressed, with a C-terminal polyhistidine tag                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Source</b>           | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>ProteinLength</b>    | 1-334 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>      | <p>Mouse 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. 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.</p> |
| <b>Form</b>             | Lyophilized from sterile 20 mM Tris,150 mM NaCl, pH 7.5. Normally 5 % - 8 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

|                             |                                                                                                                                                                                                                                                                                                                 |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>               | > 90 % as determined by SDS-PAGE                                                                                                                                                                                                                                                                                |
| <b>Endotoxin</b>            | μ1.0 EU per μg protein as determined by the LAL method                                                                                                                                                                                                                                                          |
| <b>Stability</b>            | Samples are stable for up to twelve months from date of receipt at -70 μ                                                                                                                                                                                                                                        |
| <b>Predicted N terminal</b> | Thr 18                                                                                                                                                                                                                                                                                                          |
| <b>Molecular Mass</b>       | The secreted recombinant mouse CTSL ( pro form ) consists of 328 amino acids and has a calculated molecular mass of 37.3 kDa. The recombinant protein migrates as several bands probably including the pro form, mature form, the pro peptide and the cleaved heavy chain in SDS-PAGE under reducing conditions |
| <b>Storage</b>              | Store it under sterile conditions at -70μ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage. Avoid repeated freeze-thaw cycles.                                                                                                                                      |

## GENE INFORMATION

|                        |                                                                                                                                |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | Ctsl cathepsin L [ <i>Mus musculus</i> ]                                                                                       |
| <b>Official Symbol</b> | Ctsl                                                                                                                           |
| <b>Synonyms</b>        | Ctsl; fs; MEP; nkt; Ctsl1; 1190035F06Rik; cathepsin L1; Cat L; nactk; furless; major excreted protein; p39 cysteine proteinase |
| <b>Gene ID</b>         | 13039                                                                                                                          |

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| <b>mRNA Refseq</b>         | NM_009984                                                                                                                                                                                                             |
| <b>Protein Refseq</b>      | NP_034114                                                                                                                                                                                                             |
| <b>UniProt ID</b>          | P06797                                                                                                                                                                                                                |
| <b>Chromosome Location</b> | 13 B3; 13 30.0 cM                                                                                                                                                                                                     |
| <b>Pathway</b>             | Antigen processing and presentation; Endochondral Ossification; Lysosome; Phagosome; Rheumatoid arthritis; thyroid hormone biosynthesis                                                                               |
| <b>Function</b>            | aminopeptidase activity; cysteine-type endopeptidase activity; cysteine-type peptidase activity; histone binding; hydrolase activity; kininogen binding; peptidase activity; peptide binding; protein complex binding |

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