

**Cathepsin L(heavy chain) Polyclonal Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP54282****Specification****Cathepsin L(heavy chain) Polyclonal Antibody - Product Information**

|                                  |                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Application                      | WB, IHC-P, IHC-F, IF, ICC, E                                                                                                                                                                                                                                                                                                                                                        |
| Primary Accession                | <a href="#">P06797</a>                                                                                                                                                                                                                                                                                                                                                              |
| Reactivity                       | Rat                                                                                                                                                                                                                                                                                                                                                                                 |
| Host                             | Rabbit                                                                                                                                                                                                                                                                                                                                                                              |
| Clonality                        | Polyclonal                                                                                                                                                                                                                                                                                                                                                                          |
| Calculated MW                    | 19/37 KDa                                                                                                                                                                                                                                                                                                                                                                           |
| Physical State                   | Liquid                                                                                                                                                                                                                                                                                                                                                                              |
| Immunogen                        | KLH conjugated synthetic peptide derived from mouse Cathepsin L                                                                                                                                                                                                                                                                                                                     |
| Epitope Specificity              | 101-200/334                                                                                                                                                                                                                                                                                                                                                                         |
| Isotype                          | IgG                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Purity</b>                    |                                                                                                                                                                                                                                                                                                                                                                                     |
| affinity purified by Protein A   |                                                                                                                                                                                                                                                                                                                                                                                     |
| Buffer                           | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.                                                                                                                                                                                                                                                                                                                   |
| SUBCELLULAR LOCATION             | Lysosome.                                                                                                                                                                                                                                                                                                                                                                           |
| SIMILARITY                       | Belongs to the peptidase C1 family.                                                                                                                                                                                                                                                                                                                                                 |
| SUBUNIT                          | Dimer of a heavy and a light chain linked by disulfide bonds (Probable). Interacts with Long isoform of CD74/li chain; the interaction stabilizes the conformation of mature CTSL (PubMed:11483509, PubMed:12417635).                                                                                                                                                               |
| Post-translational modifications | During export along the endocytic pathway, pro-CTSL undergoes several proteolytic cleavages to generate the CTSL single-chain and two-chain mature forms, composed of a heavy chain linked to a light chain by disulfide bonds (PubMed:11483509).Autocleavage; produces the single-chain CTSL after cleavage of the propeptide. The cleavage can be intermolecular (By similarity). |
| Important Note                   | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.                                                                                                                                                                                                                                                           |

**Background Descriptions**

The protein encoded by this gene 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. The encoded protein has been implicated in several pathologic processes, including myofibril necrosis in myopathies and in myocardial ischemia, and in the renal tubular response to proteinuria. This protein, which is a member of the peptidase C1 family, is a dimer composed of disulfide-linked heavy and light chains, both produced from a single protein precursor. At least two transcript variants encoding

the same protein have been found for this gene.

## Cathepsin L(heavy chain) Polyclonal Antibody - Additional Information

**Gene ID** 13039

### Other Names

Procathepsin L, 3.4.22.15, Cathepsin L1, Major excreted protein, MEP, p39 cysteine proteinase, Cathepsin L, Cathepsin L heavy chain, Cathepsin L light chain, Ctsl {ECO:0000312|MGI:MGI:88564}, Ctsl1

### Target/Specificity

Expressed in thymus, kidney and liver (PubMed:9545226). Expressed in thyroid epithelial cells. Expressed in cortical thymic epithelial cells (PubMed:9545226). Expressed by antigen presenting cells (APCs) such as dendritic cells and macrophages (PubMed:11483509, PubMed:12417635).

### Dilution

<span class="dilution\_WB">WB~~1:1000</span><br \><span class="dilution\_IHC-P">IHC-P~~N/A</span><br \><span class="dilution\_IHC-F">IHC-F~~N/A</span><br \><span class="dilution\_IF">IF~~1:50~200</span><br \><span class="dilution\_ICC">ICC~~N/A</span><br \><span class="dilution\_E">E~~N/A</span>

### Format

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

### Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

## Cathepsin L(heavy chain) Polyclonal Antibody - Protein Information

**Name** Ctsl {ECO:0000312|MGI:MGI:88564}

**Synonyms** Ctsl1

### Function

Thiol protease important for the overall degradation of proteins in lysosomes (Probable). Involved in the solubilization of cross-linked TG/thyroglobulin and in the subsequent release of thyroid hormone thyroxine (T4) by limited proteolysis of TG/thyroglobulin in the thyroid follicle lumen (PubMed:<a href="http://www.uniprot.org/citations/12782676" target="\_blank">12782676</a>). In neuroendocrine chromaffin cells secretory vesicles, catalyzes the prohormone proenkephalin processing to the active enkephalin peptide neurotransmitter (PubMed:<a href="http://www.uniprot.org/citations/12869695" target="\_blank">12869695</a>). In thymus, regulates CD4(+) T cell positive selection by generating the major histocompatibility complex class II (MHCII) bound peptide ligands presented by cortical thymic epithelial cells (PubMed:<a href="http://www.uniprot.org/citations/12021314" target="\_blank">12021314</a>). Also mediates invariant chain processing in cortical thymic epithelial cells (PubMed:<a href="http://www.uniprot.org/citations/9545226" target="\_blank">9545226</a>). Major elastin-degrading enzyme at neutral pH. Accumulates as a mature and active enzyme in the extracellular space of antigen presenting cells (APCs) to regulate degradation of the extracellular matrix in the course of inflammation (PubMed:<a href="http://www.uniprot.org/citations/12417635" target="\_blank">12417635</a>). Secreted

form generates endostatin from COL18A1 (PubMed:<a href="http://www.uniprot.org/citations/10716919" target="\_blank">10716919</a>). Critical for cardiac morphology and function (PubMed:<a href="http://www.uniprot.org/citations/11972068" target="\_blank">11972068</a>). Plays an important role in hair follicle morphogenesis and cycling, as well as epidermal differentiation (PubMed:<a href="http://www.uniprot.org/citations/12163394" target="\_blank">12163394</a>). Required for maximal stimulation of steroidogenesis by TIMP1 (By similarity).

#### **Cellular Location**

Lysosome. Apical cell membrane; Peripheral membrane protein; Extracellular side. Secreted, extracellular space. Secreted Cytoplasmic vesicle, secretory vesicle, chromaffin granule {ECO:0000250|UniProtKB:P25975}. Note=Localizes to the apical membrane of thyroid epithelial cells. Released at extracellular space by activated dendritic cells and macrophages (PubMed:12417635)

#### **Tissue Location**

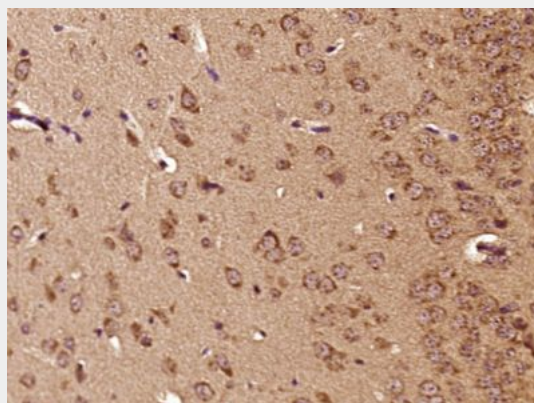
Expressed in thymus, kidney and liver (PubMed:9545226). Expressed in thyroid epithelial cells. Expressed in cortical thymic epithelial cells (PubMed:9545226). Expressed by antigen presenting cells (APCs) such as dendritic cells and macrophages (PubMed:11483509, PubMed:12417635).

### **Cathepsin L(heavy chain) Polyclonal Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Cathepsin L(heavy chain) Polyclonal Antibody - Images**



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Cathepsin L) Polyclonal Antibody, Unconjugated (bs-10523R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.