10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Cathepsin L(heavy chain) Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54282

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	P06797
Reactivity	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	37547
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse Cathepsin L
Epitope Specificity	101-200/334
Isotype	IgG
Purity	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/Ii 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.

Additional Information

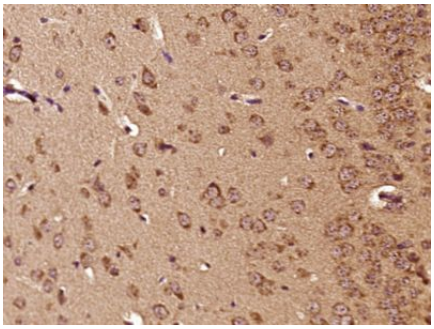
Gene ID	13039
Other Names	Procathepsin L, 3.4.22.15, Cathepsin L1, Major excreted protein, MEP, p39 cysteine proteinase, Cathepsin L, Cathepsin L heavy chain, Cathepsin L light

	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	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 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.

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:12782676). In neuroendocrine chromaffin cells secretory vesicles, catalyzes the prohormone proenkephalin processing to the active enkephalin peptide neurotransmitter (PubMed:12869695). 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:12021314). Also mediates invariant chain processing in cortical thymic epithelial cells (PubMed:9545226). 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:12417635). Secreted form generates endostatin from COL18A1 (PubMed:10716919). Critical for cardiac morphology and function (PubMed:11972068). Plays an important role in hair follicle morphogenesis and cycling, as well as epidermal differentiation (PubMed:12163394). 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).

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 (AP54282) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.