

Anti-Cathepsin L Antibody (Monoclonal, 33/2)

Catalog # ABO10409

Product Information

Application	WB, IHC-F
Primary Accession	P07154
Host	Mouse
Isotype	Mouse IgG1
Reactivity	Human, Mouse, Rat
Clonality	Monoclonal
Format	Lyophilized
Description	Mouse IgG monoclonal antibody for Cathepsin L, cathepsin L1 (CTSL1) detection. Tested with WB, IHC-F in Human;mouse;rat. No cross reactivity with other proteins.
Reconstitution	Add 1ml of PBS buffer will yield a concentration of 100ug/ml.

Additional Information

Gene ID	25697
Other Names	Cathepsin L1, 3.4.22.15, Cathepsin L, Cyclic protein 2, CP-2, Major excreted protein, MEP, Procathepsin L, Cathepsin L1 heavy chain, Cathepsin L1 light chain, CtSl, CtSl1
Calculated MW	37660
Application Details	Immunohistochemistry(Frozen Section), 4 µg/ml, Human, mouse, rat, - Western blot, 2 µg/ml, Human, mouse, rat
Subcellular Localization	Lysosome .
Tissue Specificity	Both mature cathepsin L1 and procathepsin L are found in the upper epidermis. The lower epidermis predominantly contains procathepsin L. In seminiferous tubules expression is greater at stages VI-VII than at stages IX-XII. .
Source	Eukaryota
Protein Name	Cathepsin L1
Contents	Mouse ascites fluid, 1.2% sodium acetate, 2mg BSA, with 0.01mg NaN3 as preservative.
Clone Names	33/2
Immunogen	Procathepsin L isolated from the human lung cancer cell line EPLC 32M1.

Purification	Ascites
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20° C for one year. After r° Constitution, at 4° C for one month. It° Can also be aliquotted and stored frozen at -20° C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the peptidase C1 family.

Protein Information

Name	Ctsl {ECO:0000312 RGD:2448}
Synonyms	Ctsl1
Function	Thiol protease important for the overall degradation of proteins in lysosomes (By similarity). Plays a critical for normal cellular functions such as general protein turnover, antigen processing and bone remodeling. 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 (By similarity). In neuroendocrine chromaffin cells secretory vesicles, catalyzes the prohormone proenkephalin processing to the active enkephalin peptide neurotransmitter (By similarity). 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. Also mediates invariant chain processing in cortical thymic epithelial cells. 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 (By similarity). Secreted form generates endostatin from COL18A1 (By similarity). Critical for cardiac morphology and function. Plays an important role in hair follicle morphogenesis and cycling, as well as epidermal differentiation (By similarity). Required for maximal stimulation of steroidogenesis by TIMP1 (PubMed: 7777858).
Cellular Location	Lysosome. Apical cell membrane {ECO:0000250 UniProtKB:P06797}; Peripheral membrane protein {ECO:0000250 UniProtKB:P06797}; Extracellular side {ECO:0000250 UniProtKB:P06797}. Cytoplasmic vesicle, secretory vesicle, chromaffin granule {ECO:0000250 UniProtKB:P25975}. Secreted, extracellular space {ECO:0000250 UniProtKB:P06797}. Secreted. Note=Localizes to the apical membrane of thyroid epithelial cells. Released at extracellular space by activated dendritic cells and macrophages. {ECO:0000250 UniProtKB:P06797}
Tissue Location	Both mature cathepsin L1 and procathepsin L are found in the upper epidermis. The lower epidermis predominantly contains procathepsin L. In seminiferous tubules expression is greater at stages VI-VII than at stages IX-XII.

Background

Cathepsin L is a lysosomal cysteine proteinase with a major role in intracellular protein catabolism. It also shows the most potent collagenolytic and elastinolytic activity in vitro of any of the cathepsins. Cathepsin L has been implicated in pathologic processes including myofibril necrosis in myopathies and in myocardial ischemia, and in the renal tubular response to proteinuria. Human liver cathepsin L consists of a heavy chain of about 25 kD and a light chain of about 5 kD. The gene is mapped to 9q21-q22. Cathepsin L is required for

endothelial progenitor cell-induced neovascularization.

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