

cathepsin L (CPLH-3G10): sc-32800

BACKGROUND

The cathepsin family of proteolytic enzymes contains several diverse classes of proteases. The cysteine protease class comprises cathepsins B, L, H, K, S, and O. The aspartyl protease class is composed of cathepsins D and E. Cathepsin G is in the serine protease class. Most cathepsins are lysosomal and each is involved in cellular metabolism, participating in various events such as peptide biosynthesis and protein degradation. Cathepsin L (also designated major excreted protein, MEP or CATL) is a member of the peptidase C1 family and has been identified as a protein that is most closely related to cathepsin H. It is a lysosomal cysteine proteinase that mediates intracellular protein catabolism for collagen, elastin and α -1 protease inhibitor. Cathepsin L 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. Transformed mouse fibroblasts stimulated by growth factors or tumor promoters secrete a form of cathepsin L.

CHROMOSOMAL LOCATION

Genetic locus: CTSL (human) mapping to 9q21.33; Ctsl (mouse) mapping to 13 B3.

SOURCE

cathepsin L (CPLH-3G10) is a mouse monoclonal antibody raised against procathepsin L.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

cathepsin L (CPLH-3G10) is recommended for detection of cathepsin L and procathepsin L of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for cathepsin L siRNA (h): sc-29938, cathepsin L siRNA (m): sc-29939, cathepsin L shRNA Plasmid (h): sc-29938-SH, cathepsin L shRNA Plasmid (m): sc-29939-SH, cathepsin L shRNA (h) Lentiviral Particles: sc-29938-V and cathepsin L shRNA (m) Lentiviral Particles: sc-29939-V.

Molecular Weight of mature cathepsin L: 25-35 kDa.

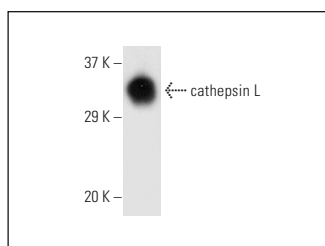
Molecular Weight of procathepsin L: 38-42 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, NIH/3T3 whole cell lysate: sc-2210 or 3T3-L1 cell lysate: sc-2243.

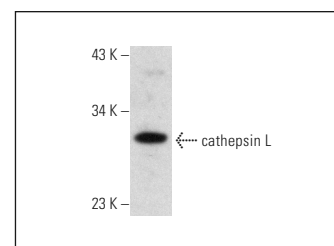
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



cathepsin L (CPLH-3G10): sc-32800. Western blot analysis of cathepsin L expression in mouse macrophage culture supernatant.



cathepsin L (CPLH-3G10): sc-32800. Western blot analysis of cathepsin L expression in RAW 264.7 whole cell lysate.

SELECT PRODUCT CITATIONS

- Deshapriya, R.M., et al. 2010. Identification of essential residues of CTLA-2 α for inhibitory potency. *J. Biochem.* 147: 393-404.
- Veselits, M., et al. 2014. Recruitment of Cbl-b to B cell antigen receptor couples antigen recognition to Toll-like receptor 9 activation in late endosomes. *PLoS ONE* 9: e89792.
- Veselits, M., et al. 2017. Ig β ubiquitination activates PI3K signals required for endosomal sorting. *J. Exp. Med.* 214: 3775-3790.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.