

cathepsin L (M-19): sc-6502

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 (mouse) mapping to 13 B3.

SOURCE

cathepsin L (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of cathepsin L of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-6502 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

cathepsin L (M-19) is recommended for detection of cathepsin L of mouse and rat 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

cathepsin L (M-19) is also recommended for detection of cathepsin L in additional species, including canine.

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

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

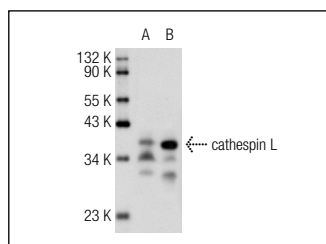
Molecular Weight of procathepsin L: 38-42 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, KNRK whole cell lysate: sc-2214 or 3T3-L1 cell lysate : sc-2243.

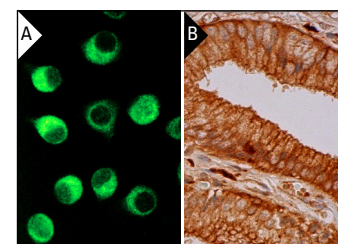
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



cathepsin L (M-19): sc-6502. Western blot analysis of cathepsin L expression in 3T3-L1 (A) and RAW 264.7 (B) whole cell lysates.



cathepsin L (M-19): sc-6502. Immunofluorescence staining of methanol-fixed KNRK cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic and membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Goulet, B., et al. 2004. A cathepsin L isoform that is devoid of a signal peptide localizes to the nucleus in S phase and processes the CDP/Cux transcription factor. *Mol. Cell* 14: 207-219.
- Blander, J.M., et al. 2006. Toll-dependent selection of microbial antigens for presentation by dendritic cells. *Nature* 7085: 808-812.
- Ma, J., et al. 2007. Induced expression of cathepsins and cystatin C in a murine model of demyelination. *Neurochem. Res.* 32: 311-320.

STORAGE

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



Try **cathepsin L (G-11): sc-390367** or **cathepsin L (E-5): sc-390385**, our highly recommended monoclonal alternatives to cathepsin L (M-19).