

cathepsin B (FL-339): sc-13985

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 B is expressed in luminal epithelial cells, indicating that cathepsin B is a marker for secretory cell death.

CHROMOSOMAL LOCATION

Genetic locus: CTSB (human) mapping to 8p23.1; Ctsb (mouse) mapping to 14 D1.

SOURCE

cathepsin B (FL-339) is a rabbit polyclonal antibody raised against amino acids 1-339 representing full length cathepsin B of human origin.

PRODUCT

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

APPLICATIONS

cathepsin B (FL-339) is recommended for detection of cathepsin B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 B (FL-339) is also recommended for detection of cathepsin B in additional species, including equine.

Suitable for use as control antibody for cathepsin B siRNA (h): sc-29238, cathepsin B siRNA (m): sc-29933, cathepsin B shRNA Plasmid (h): sc-29238-SH, cathepsin B shRNA Plasmid (m): sc-29933-SH, cathepsin B shRNA (h) Lentiviral Particles: sc-29238-V and cathepsin B shRNA (m) Lentiviral Particles: sc-29933-V.

Molecular Weight of cathepsin B proenzyme: 37 kDa.

Molecular Weight of activated cathepsin B: 25 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, LS 1034 whole cell lysate or WI-38 whole cell lysate: sc-364260.

STORAGE

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

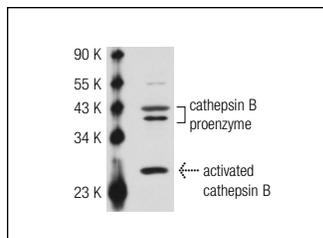
PROTOCOLS

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

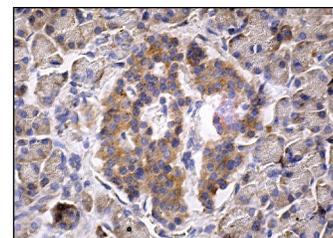
RESEARCH USE

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

DATA



cathepsin B (FL-339): sc-13985. Western blot analysis of cathepsin B expression in 293T whole cell lysate.



cathepsin B (FL-339): sc-13985. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans and glandular cells.

SELECT PRODUCT CITATIONS

- Christensen, E.I., et al. 2003. Loss of chloride channel CIC-5 impairs endocytosis by defective trafficking of megalin and cubilin in kidney proximal tubules. *Proc. Natl. Acad. Sci. USA* 100: 8472-8477.
- Capparelli, C., et al. 2012. CTGF drives autophagy, glycolysis and senescence in cancer-associated fibroblasts via HIF1 activation, metabolically promoting tumor growth. *Cell Cycle* 11: 2272-2284.
- Salem, A.F., et al. 2012. Two-compartment tumor metabolism: autophagy in the tumor microenvironment and oxidative mitochondrial metabolism (OXPHOS) in cancer cells. *Cell Cycle* 11: 2545-2556.
- Cecarini, V., et al. 2012. Crosstalk between the ubiquitin-proteasome system and autophagy in a human cellular model of Alzheimer's disease. *Biochim. Biophys. Acta* 1822: 1741-1751.
- Carito, V., et al. 2012. Metabolic remodeling of the tumor microenvironment: migration stimulating factor (MSF) reprograms myofibroblasts toward lactate production, fueling anabolic tumor growth. *Cell Cycle* 11: 3403-3414.
- Capparelli, C., et al. 2012. CDK inhibitors (p16/p19/p21) induce senescence and autophagy in cancer-associated fibroblasts, "fueling" tumor growth via paracrine interactions, without an increase in neo-angiogenesis. *Cell Cycle* 11: 3599-3610.
- Sanchez-Alvarez, R., et al. 2013. Mitochondrial dysfunction in breast cancer cells prevents tumor growth: understanding chemoprevention with metformin. *Cell Cycle* 12: 172-182.
- Sanchez-Alvarez, R., et al. 2013. Ethanol exposure induces the cancer-associated fibroblast phenotype and lethal tumor metabolism: implications for breast cancer prevention. *Cell Cycle* 12: 289-301.



Try **cathepsin B (H-5): sc-365558** or **cathepsin B (CB131): sc-58333**, our highly recommended monoclonal alternatives to cathepsin B (FL-339). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **cathepsin B (H-5): sc-365558**.