

# cathepsin B (CB131): sc-58333

## 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.

## REFERENCES

1. Ishidoh, K., et al. 1987. Molecular cloning and sequencing of cDNA for rat cathepsin L. FEBS Lett. 223: 69-73.
2. Ishidoh, K., et al. 1987. Molecular cloning and sequencing of cDNA for rat cathepsin H. Homology in pro-peptide regions of cysteine proteases. FEBS Lett. 226: 33-37.
3. Redecker, B., et al. 1991. Molecular organization of the human cathepsin D gene. DNA Cell Biol. 10: 423-431.
4. Shi, G.P., et al. 1992. Molecular cloning and expression of human alveolar macrophage cathepsin S, an elastolytic cysteine protease. J. Biol. Chem. 267: 7258-7262.
5. Heusel, J.W., et al. 1993. Molecular cloning, chromosomal location and tissue-specific expression of the murine cathepsin G gene. Blood 81: 1614-1623.
6. Guenette, R.S., et al. 1994. cathepsin B, a cysteine protease implicated in metastatic progression, is also expressed during regression of the rat prostate and mammary glands. Eur. J. Biochem. 226: 311-321.
7. Shi, G.P., et al. 1995. Molecular cloning of human cathepsin O, a novel endoproteinase and homolog of rabbit OC2. FEBS Lett. 357: 129-134.
8. Okamoto, K., et al. 1995. Isolation and sequencing of two cDNA clones encoding rat spleen cathepsin E and analysis of the activation of purified procathepsin E. Arch. Biochem. Biophys. 322: 103-111.
9. Rantakokko, J., et al. 1996. Mouse cathepsin K: cDNA cloning and pre-dominant expression of the gene in osteoclasts, and in some hypertrophy-ing chondrocytes during mouse development. FEBS Lett. 393: 307-313.

## CHROMOSOMAL LOCATION

Genetic locus: CTSB (human) mapping to 8p23.1.

## SOURCE

cathepsin B (CB131) is a mouse monoclonal antibody raised against full length cathepsin B of human origin.

## PRODUCT

Each vial contains 250 µl culture supernatant containing IgG<sub>2b</sub> with < 0.1% sodium azide.

## APPLICATIONS

cathepsin B (CB131) is recommended for detection of cathepsin B of human origin by immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:500) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:30-1:3000).

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

Molecular Weight of cathepsin B proenzyme: 37 kDa.

Molecular Weight of activated cathepsin B: 25 kDa.

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **cathepsin B (H-5): sc-365558** for cathepsin B antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647.