

cathepsin Z (C-17): sc-32172

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 G expression is restricted to bone marrow and early myeloid cells. Cathepsin Z, also designated cathepsin X or P, shows both carboxy-dipeptidase and carboxy-monopeptidase activity. It is a widely expressed protein that, similar to other cathepsins, may be involved in tumor progression. Cathepsin Z plays a role in normal intracellular protein degradation.

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 elastinolytic 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. Rantakokko, J., et al. 1996. Mouse cathepsin K: cDNA cloning and predominant expression of the gene in osteoclasts and in some hypertrophying chondrocytes during mouse development. *FEBS Lett.* 393: 307-313.
7. Nagler, D.K. et al. 1998. Human cathepsin X: a novel cysteine protease of the papain family with a very short proregion and unique insertions. *FEBS Lett.* 434: 135-139.

CHROMOSOMAL LOCATION

Genetic locus: CTSZ (human) mapping to 20q13.32; Ctsz (mouse) mapping to 2 H4.

SOURCE

cathepsin Z (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of cathepsin Z 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.

Blocking peptide available for competition studies, sc-32172 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

cathepsin Z (C-17) is recommended for detection of cathepsin Z 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

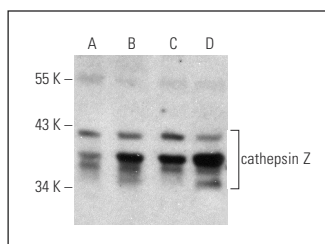
cathepsin Z (C-17) is also recommended for detection of cathepsin Z in additional species, including bovine and porcine.

Suitable for use as control antibody for cathepsin Z siRNA (h): sc-44661, cathepsin Z siRNA (m): sc-44662, cathepsin Z shRNA Plasmid (h): sc-44661-SH, cathepsin Z shRNA Plasmid (m): sc-44662-SH, cathepsin Z shRNA (h) Lentiviral Particles: sc-44661-V and cathepsin Z shRNA (m) Lentiviral Particles: sc-44662-V.

Molecular Weight of cathepsin Z: 33 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SK-MEL-28 cell lysate: sc-2236 or Caki-1 cell lysate: sc-2224.

DATA



cathepsin Z (C-17): sc-32172. Western blot analysis of cathepsin Z expression in HeLa (A), SK-MEL-28 (B), WI 38 (C) and Caki-1 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Akahoshi, N., et al. 2007. Increased expression of the lysosomal protease cathepsin S in hippocampal microglia following kainate-induced seizures. *Neurosci. Lett.* 429: 136-141.

STORAGE

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

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **cathepsin Z (F-6): sc-376976**, our highly recommended monoclonal alternative to cathepsin Z (C-17).