SANTA CRUZ BIOTECHNOLOGY, INC.

cathepsin F (H-110): sc-13987

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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, E and F. 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 F is widely expressed in human tissues, but it is most highly expressed in heart, skeletal muscle, brain, testis, and ovary. Cathepsin F is thought to play a role in normal protein catabolism, and because it is highly expressed in some cancer cell lines, it may be involved in degradative processes occurring during tumor progression.

REFERENCES

1. Redecker, B., et al. 1991. Molecular organization of the human cathepsin D gene. DNA Cell Biol. 10: 423-431.
2. Heusel, J.W., et al. 1993. Molecular cloning, chromosomal location, and tissue-specific expression of the murine cathepsin G gene. Blood 81: 1614-1623.
3. 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.
4. Turk, B., et al. 1997. Structural and functional aspects of papain-like cysteine proteinases and their protein inhibitors. Biol. Chem. 378: 141-150.
5. Wang, B., et al. 1998. Human cathepsin F. molecular cloning, functional expression, tissue localization, and enzymatic characterization. J. Biol. Chem. 273: 32000-32008.

CHROMOSOMAL LOCATION

Genetic locus: CTSF (human) mapping to 11q13.2; Ctsf (mouse) mapping to 19 A.

SOURCE

cathepsin F (H-110) is a rabbit polyclonal antibody raised against amino acids 325-434 of cathepsin F 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.

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.

APPLICATIONS

cathepsin F (H-110) is recommended for detection of cathepsin F 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).

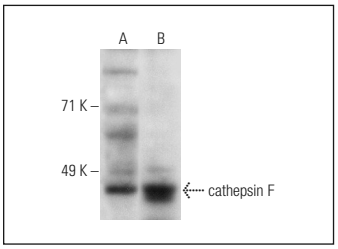
cathepsin F (H-110) is also recommended for detection of cathepsin F in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for cathepsin F siRNA (h): sc-41475, cathepsin F siRNA (m): sc-41476, cathepsin F shRNA Plasmid (h): sc-41475-SH, cathepsin F shRNA Plasmid (m): sc-41476-SH, cathepsin F shRNA (h) Lentiviral Particles: sc-41475-V and cathepsin F shRNA (m) Lentiviral Particles: sc-41476-V.

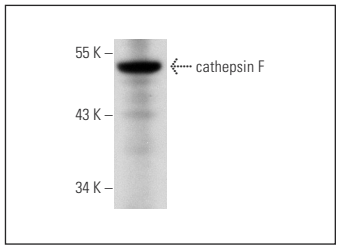
Molecular Weight of cathepsin F: 53 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or mouse liver extract: sc-2256.

DATA



cathepsin F (H-110): sc-13987. Western blot analysis of cathepsin F expression in 293T (**A**) and HeLa (**B**) whole cell lysates.



cathepsin F (H-110): sc-13987. Western blot analysis of cathepsin F expression in mouse liver tissue extract.

SELECT PRODUCT CITATIONS

1. Oorni, K., et al. 2004. Cysteine protease cathepsin F is expressed in human atherosclerotic lesions, is secreted by cultured macrophages, and modifies low density lipoprotein particles *in vitro*. J. Biol. Chem. 279: 34776-34784.
2. Dorn, A., et al. 2005. Identification of specific cellular genes up-regulated late in adenovirus type 12 infection. J. Virol. 79: 2404-2412.
3. Maubach, G., et al. 2008. Nuclear cathepsin F regulates activation markers in rat hepatic stellate cells. Mol. Biol. Cell 19: 4238-4248.
4. Saghizadeh, M., et al. 2010. Adenovirus-driven overexpression of proteinases in organ-cultured normal human corneas leads to diabetic-like changes. Brain Res. Bull. 81: 262-272.

RESEARCH USE

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