

cathepsin S (h): 293T Lysate: sc-158354

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 S has been shown to be an elastinolytic cysteine proteinase present in alveolar macrophages.

REFERENCES

1. Ishidoh, K., Towatari, T., Imajoh, S., Kawasaki, H., Kominami, E., Katunuma, N. and Suzuki, K. 1987. Molecular cloning and sequencing of cDNA for rat cathepsin L. *FEBS Lett.* 223: 69-73.
2. Ishidoh, K., Imajoh, S., Emori, Y., Ohno, S., Kawasaki, H., Minami, Y., Kominami, E., Katunuma, N. and Suzuki, K. 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., Heckendorf, B., Grosch, H.W., Mersmann, G. and Hasilik, A. 1991. Molecular organization of the human cathepsin D gene. *DNA Cell Biol.* 10: 423-431.
4. Shi, G.P., Munger, J.S., Meara, J.P., Rich, D.H. and Chapman, H.A. 1992. Molecular cloning and expression of human alveolar macrophage cathepsin S, an elastinolytic cysteine protease. *J. Biol. Chem.* 267: 7258-7262.
5. Guenette, R.S., Mooibroek, M., Wong, K., Wong, P. and Tenniswood, M. 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.
6. Shi, G.P., Chapman, H.A., Bhairi, S.M., DeLeeuw, C., Reddy, V.Y. and Weiss, S.J. 1995. Molecular cloning of human cathepsin O, a novel endoproteinase and homologue of rabbit OC2. *FEBS Lett.* 357: 129-134.
7. Okamoto, K., Yu, H., Misumi, Y., Ikehara, Y. and Yamamoto, K. 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.
8. Rantakokko, J., Aro, H.T., Savontaus, M. and Vuorio, E. 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.

CHROMOSOMAL LOCATION

Genetic locus: CTSS (human) mapping to 1q21.3.

PRODUCT

cathepsin S (h): 293T Lysate represents a lysate of human cathepsin S transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

cathepsin S (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive cathepsin S antibodies. Recommended use: 10-20 µl per lane.

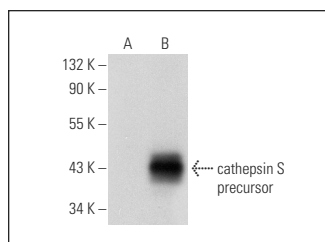
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

cathepsin S (G-5): sc-74429 is recommended as a positive control antibody for Western Blot analysis of enhanced human cathepsin S expression in cathepsin S transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



cathepsin S (G-5): sc-74429. Western blot analysis of cathepsin S expression in non-transfected: sc-117752 (A) and human cathepsin S transfected: sc-158354 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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