



cathepsin O (h): 293T Lysate: sc-115992

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 O maintains the structural features characteristic of other cysteine proteinases including the active site cysteine residue that is involved in covalent intermediate formation during peptide hydrolysis. cathepsin O is an endoprotease that may be involved in extracellular matrix degradation. cathepsin O is abundantly expressed in the ovary, kidney and placenta with lower levels found in thymus and skeletal muscle.

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. 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. Velasco, G., et al. 1994. Human cathepsin O. Molecular cloning from a breast carcinoma, production of the active enzyme in *Escherichia coli*, and expression analysis in human tissues. J. Biol. Chem. 269: 27136-27142.
8. Shi, G.P., et al. 1995. Molecular cloning of human cathepsin O, a novel endoprotease and homologue of rabbit OC2. FEBS Lett. 357: 129-134.
9. 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.

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 for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: CTSO (human) mapping to 4q32.1.

PRODUCT

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

APPLICATIONS

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

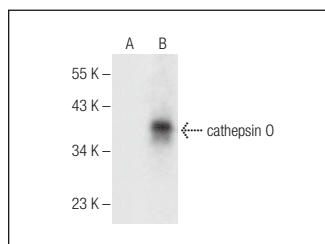
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

cathepsin O (E-7): sc-390117 is recommended as a positive control antibody for Western Blot analysis of enhanced human cathepsin O expression in cathepsin O 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 O (E-7): sc-390117. Western blot analysis of cathepsin O expression in non-transfected: sc-117752 (A) and human cathepsin O transfected: sc-115992 (B) 293T whole cell lysates.

RESEARCH USE

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