

# cathepsin S (H-50): sc-30057

## 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 elastolytic cysteine proteinase present in alveolar macrophages.

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: CTSS (human) mapping to 1q21.3; Ctss (mouse) mapping to 3 F2.1.

## SOURCE

cathepsin S (H-50) is a rabbit polyclonal antibody raised against amino acids 191-240 mapping within an internal region of cathepsin S 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.

## APPLICATIONS

cathepsin S (H-50) is recommended for detection of cathepsin S 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 S (H-50) is also recommended for detection of cathepsin S in additional species, including equine.

Suitable for use as control antibody for DNase I siRNA (h): sc-41505, DNase I siRNA (m): sc-41506, DNase I shRNA Plasmid (h): sc-41505-SH, DNase I shRNA Plasmid (m): sc-41506-SH, DNase I shRNA (h) Lentiviral Particles: sc-41505-V and DNase I shRNA (m) Lentiviral Particles: sc-41506-V.

Molecular Weight of mature cathepsin S: 24 kDa.

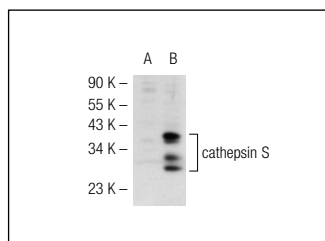
Molecular Weight of cathepsin S precursor: 37 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, U-87 MG cell lysate: sc-2411 or cathepsin S (m): 293T Lysate: sc-119040.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/ 2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



cathepsin S (H-50): sc-30057. Western blot analysis of cathepsin S expression in non-transfected: sc-117752 (A) and mouse cathepsin S transfected: sc-119040 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Ferreira, G.B., et al. 2008. Protein-induced changes during the maturation process of human dendritic cells: A 2-D DIGE approach. *Proteomics Clin. Appl.* 2: 1349-1360.
2. Chang, C.J., et al. 2009. Degradation of the internal elastic laminae in vein grafts of rats with aortocaval fistulae: potential impact on graft vasculopathy. *Am. J. Pathol.* 174: 1837-1846.
3. Ferreira, G.B., et al. 2009. Proteome analysis demonstrates profound alterations in human dendritic cell nature by TX527, an analogue of vitamin D. *Proteomics* 9: 3752-3764.

## 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.



Try **cathepsin S (E-3): sc-271619** or **cathepsin S (G-5): sc-74429**, our highly recommended monoclonal alternatives to cathepsin S (H-50). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **cathepsin S (E-3): sc-271619**.