

# cathepsin S (M-19): sc-6505

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

cathepsin S (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of cathepsin S of rat origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6505 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

cathepsin S (M-19) 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).

Suitable for use as control antibody for cathepsin S siRNA (h): sc-29940, cathepsin S siRNA (m): sc-29941, cathepsin S shRNA Plasmid (h): sc-29940-SH, cathepsin S shRNA Plasmid (m): sc-29941-SH, cathepsin S shRNA (h) Lentiviral Particles: sc-29940-V and cathepsin S shRNA (m) Lentiviral Particles: sc-29941-V.

Molecular Weight of mature cathepsin S: 24 kDa.

Molecular Weight of cathepsin S precursor: 37 kDa.

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

## STORAGE

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

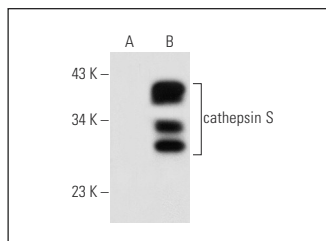
## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

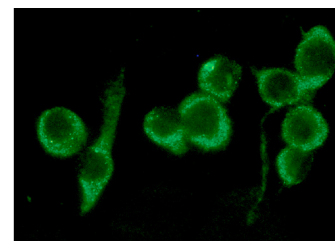
## RESEARCH USE

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

## DATA



cathepsin S (M-19): sc-6505. 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.



cathepsin S (M-19): sc-6505. Immunofluorescence staining of methanol-fixed RAW 264.7 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Burns-Kurtis C.L., et al. 2004. Cathepsin S expression is up-regulated following balloon angioplasty in the hypercholesterolemic rabbit. *Cardiovasc. Res.* 62: 610-620.
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- Barclay, J., et al. 2007. Role of the cysteine protease cathepsin S in neuropathic hyperalgesia. *Pain* 130: 225-234.
- 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.
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- Clark, A.K., et al. 2010. Cathepsin S release from primary cultured microglia is regulated by the P2X7 receptor. *Glia* 58: 1710-1726.
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Try **cathepsin S (E-3): sc-271619** or **cathepsin S (G-5): sc-74429**, our highly recommended monoclonal alternatives to cathepsin S (M-19). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **cathepsin S (E-3): sc-271619**.