

pan cathepsin (H-1): sc-376803

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 L has been identified as a protein that is most closely related to cathepsin H.

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.

SOURCE

pan cathepsin (H-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 107-145 near the N-terminus of cathepsin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

pan cathepsin (H-1) is available conjugated to agarose (sc-376803 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376803 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376803 PE), fluorescein (sc-376803 FITC), Alexa Fluor® 488 (sc-376803 AF488), Alexa Fluor® 546 (sc-376803 AF546), Alexa Fluor® 594 (sc-376803 AF594) or Alexa Fluor® 647 (sc-376803 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376803 AF680) or Alexa Fluor® 790 (sc-376803 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376803 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

pan cathepsin (H-1) is recommended for detection of a broad range of cathepsin proteins of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

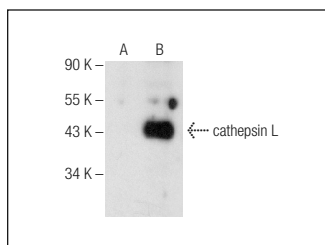
Molecular Weight of pan cathepsin: 38 kDa.

Positive Controls: cathepsin L (h3): 293 Lysate: sc-158353 or A549 cell lysate: sc-2413.

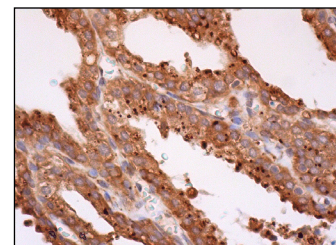
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BPFITC: sc-516140 or m-IgGκ BPE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BPHRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



pan cathepsin (H-1): sc-376803. Western blot analysis of cathepsin L expression in non-transfected: sc-110760 (A) and human cathepsin L transfected: sc-158353 (B) 293 whole cell lysates.



pan cathepsin (H-1): sc-376803. Immunoperoxidase staining of formalin fixed, paraffin-embedded human seminal vesicle tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Wang, W., et al. 2018. TRIM37 deficiency induces autophagy through deregulating the MTORC1-TFEB axis. *Autophagy* 14: 1574-1585.
2. Labadie, T. and Roy, P. 2020. A non-enveloped arbovirus released in lysosome-derived extracellular vesicles induces super-infection exclusion. *PLoS Pathog.* 16: e1009015.
3. Alfieri, M., et al. 2022. Identification of uPAR variants acting as ceRNAs in leukaemia cells. *Cancers* 14: 1980.
4. Liu, Y., et al. 2022. Bushen huoxue decoction inhibits RANKL-stimulated osteoclastogenesis and glucocorticoid-induced bone loss by modulating the NFκB, ERK, and JNK signaling pathways. *Front. Pharmacol.* 13: 1007839.

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.

PROTOCOLS

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