

cathepsin E (D-8): sc-166500

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 E is a nonlysosomal, intracellular proteinase.

CHROMOSOMAL LOCATION

Genetic locus: CTSE (human) mapping to 1q32.1; Ctse (mouse) mapping to 1 E4.

SOURCE

cathepsin E (D-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 360-395 at the C-terminus of cathepsin E of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

cathepsin E (D-8) is available conjugated to agarose (sc-166500 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166500 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166500 PE), fluorescein (sc-166500 FITC), Alexa Fluor® 488 (sc-166500 AF488), Alexa Fluor® 546 (sc-166500 AF546), Alexa Fluor® 594 (sc-166500 AF594) or Alexa Fluor® 647 (sc-166500 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166500 AF680) or Alexa Fluor® 790 (sc-166500 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166500 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

cathepsin E (D-8) is recommended for detection of cathepsin E 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).

Suitable for use as control antibody for cathepsin E siRNA (h): sc-41473, cathepsin E siRNA (m): sc-41474, cathepsin E shRNA Plasmid (h): sc-41473-SH, cathepsin E shRNA Plasmid (m): sc-41474-SH, cathepsin E shRNA (h) Lentiviral Particles: sc-41473-V and cathepsin E shRNA (m) Lentiviral Particles: sc-41474-V.

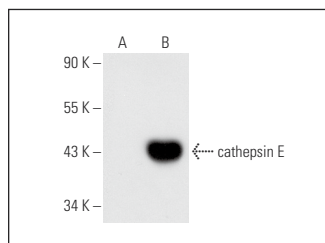
Molecular Weight of cathepsin E: 48 kDa.

Positive Controls: cathepsin E (h): 293T Lysate: sc-115648.

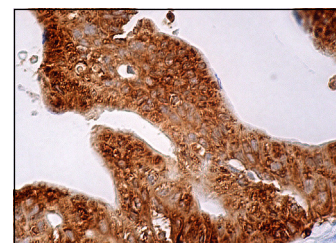
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: 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 BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



cathepsin E (D-8): sc-166500. Western blot analysis of cathepsin E expression in non-transfected: sc-117752 (A) and human cathepsin E transfected: sc-115648 (B) 293T whole cell lysates.



cathepsin E (D-8): sc-166500. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Li, H., et al. 2014. Monitoring pancreatic carcinogenesis by the molecular imaging of cathepsin E *in vivo* using confocal laser endomicroscopy. *PLoS ONE* 9: e106566.
- Ye, H., et al. 2021. TSPAN1, TMPRSS4, SDR16C5, and CTSE as novel panel for pancreatic cancer: a bioinformatics analysis and experiments validation. *Front. Immunol.* 12: 649551.
- Cui, C., et al. 2021. A lysosome-targeted DNA nanodevice selectively targets macrophages to attenuate tumours. *Nat. Nanotechnol.* 16: 1394-1402.

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.