SANTA CRUZ BIOTECHNOLOGY, INC.

cathepsin E (D-8): sc-166500

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 IgG_1 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).

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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.

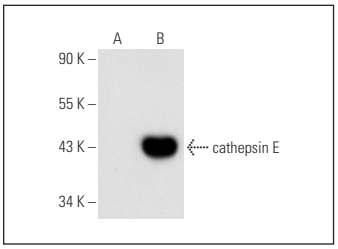
Molecular Weight of cathepsin E: 48 kDa.

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

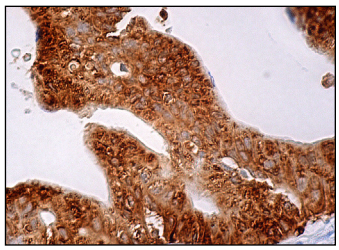
RECOMMENDED SUPPORT REAGENTS

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

1. 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.
2. 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.
3. 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.