

cathepsin D (C-20): sc-6486

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. Cathepsins may also cleave some protein precursors, thereby releasing regulatory peptides. The promoter region of the cathepsin D gene contains five Sp1 binding sites and four AP-2 binding sites.

CHROMOSOMAL LOCATION

Genetic locus: CTSD (human) mapping to 11p15.5; CtSD (mouse) mapping to 7 F5.

SOURCE

cathepsin D (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of cathepsin D 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.

Blocking peptide available for competition studies, sc-6486 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-6486 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

cathepsin D (C-20) is recommended for detection of cathepsin D 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), 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).

cathepsin D (C-20) is also recommended for detection of cathepsin D in additional species, including bovine and porcine.

Suitable for use as control antibody for cathepsin D siRNA (h): sc-29239, cathepsin D siRNA (m): sc-29934, cathepsin D shRNA Plasmid (h): sc-29239-SH, cathepsin D shRNA Plasmid (m): sc-29934-SH, cathepsin D shRNA (h) Lentiviral Particles: sc-29239-V and cathepsin D shRNA (m) Lentiviral Particles: sc-29934-V.

Molecular Weight of immature cathepsin D: 52 kDa.

Molecular Weight of intermediate cathepsin D: 46 kDa.

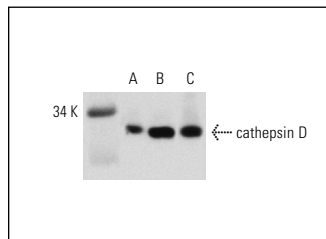
Molecular Weight of mature cathepsin D: 33 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, RAW 264.7 whole cell lysate: sc-2211 or AMJ2-C11 whole cell lysates.

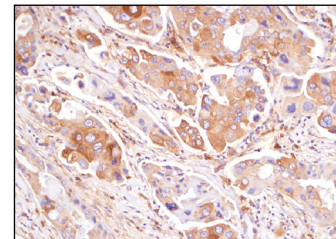
STORAGE

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

DATA



cathepsin D (C-20): sc-6486. Western blot analysis of cathepsin D expression in NIH/3T3 (A), RAW 264.7 (B) and AMJ2-C11 (C) whole cell lysates.



cathepsin D (C-20): sc-6486. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Cuervo, A.M., et al. 2000. Age-related decline in chaperone-mediated autophagy. *J. Biol. Chem.* 275: 31505-31513.
2. Sender, V., et al. 2011. Pulmonary surfactant protein A enhances endolysosomal trafficking in alveolar macrophages through regulation of Rab7. *J. Immunol.* 186: 2397-2411.
3. Khositseth, S., et al. 2011. Quantitative protein and mRNA profiling shows selective post-transcriptional control of protein expression by vasopressin in kidney cells. *Mol. Cell. Proteomics* 10: M110.004036.
4. Fujimoto, Y., et al. 2011. Transporter associated with antigen processing-like (ABC9) stably expressed in Chinese hamster ovary-K1 cells is sorted to the microdomains of lysosomal membranes. *Biol. Pharm. Bull.* 34: 36-40.
5. Bejarano-Escobar, R., et al. 2011. Macrophage and microglia ontogeny in the mouse visual system can be traced by the expression of Cathepsins B and D. *Dev. Dyn.* 240: 1841-1855.
6. Rintahaka, J., et al. 2011. Recognition of cytoplasmic RNA results in cathepsin-dependent inflammasome activation and apoptosis in human macrophages. *J. Immunol.* 186: 3085-3092.
7. Nakken, B., et al. 2011. Peroxisome proliferator-activated receptor γ -regulated cathepsin D is required for lipid antigen presentation by dendritic cells. *J. Immunol.* 187: 240-247.
8. Vega-Naredo, I., et al. 2012. Melatonin modulates autophagy through a redox-mediated action in female Syrian hamster Harderian gland controlling cell types and gland activity. *J. Pineal Res.* 52: 80-92.
9. Tiribuzi, R., et al. 2012. Nitric oxide depletion alters hematopoietic stem cell commitment toward immunogenic dendritic cells. *Biochim. Biophys. Acta* 1830: 2830-2838.

RESEARCH USE

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