

#2284 Store at -20°C

Cathepsin D Antibody

100 μl
 (10 Western mini-blot)



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 info@cellsignal.com
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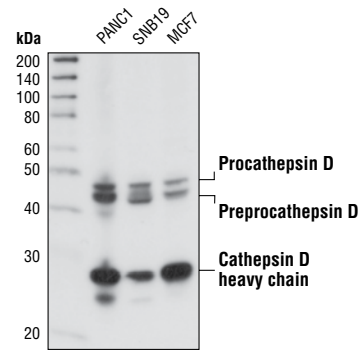
This product is for *in vitro* research use only and is not intended for use in humans or animals.
 This product is not intended for use as a therapeutic or in diagnostic procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IHC-P, F Endogenous	H	46 kDa, 43 kDa 28 kDa	Rabbit**

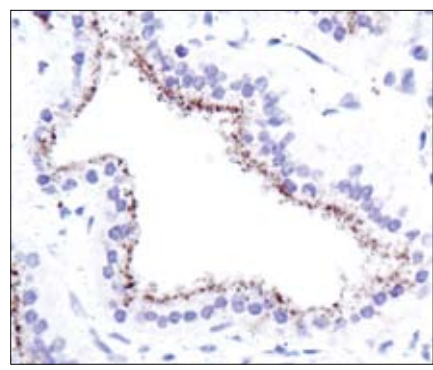
Background: Cathepsin D is a ubiquitously expressed lysosomal aspartyl protease involved in the normal degradation of proteins (1). It is synthesized as an inactive 43 kDa preprocathepsin D that is cleaved and glycosylated to form a 46 kDa procathepsin D and then further cleaved to produce 28 kDa and 15 kDa subunits (heavy and light chains, respectively) (2). Cathepsin D may also be secreted into the cytosol during apoptosis and contribute to cleavage of substrates implicated in the apoptotic pathway (3). Numerous studies have suggested that cathepsin D plays a role in neuronal degradation and malignant transformation, particularly in breast cancer (4-9).

Specificity/Sensitivity: Cathepsin D Antibody detects endogenous levels of preprocathepsin D, procathepsin D and the heavy chain subunit of mature cathepsin D.

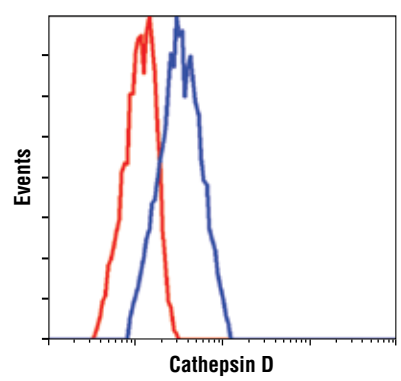
Source/Purification: Polyclonal antibodies are prepared by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to residues with the heavy chain subunit of human Cathepsin D. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from PANC1, SNB19 and MCF-7 cell lines using Cathepsin D Antibody.



Immunohistochemical analysis of paraffin-embedded human papillary carcinoma using Cathepsin D Antibody.



Flow cytometric analysis of untreated MCF-7 cells using Cathepsin D Antibody (blue) compared to a nonspecific negative control antibody (red).

Entrez-Gene ID #1509
Swiss-Prot Acc. #P07339

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 $\mu\text{g}/\text{ml}$ BSA and 50% glycerol. Store at -20°C . Do not aliquot the antibody.

***Species cross-reactivity is determined by Western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting 1:1000
 Immunohistochemistry (Paraffin) 1:50
 IHC protocol: Unmasking buffer/Antibody diluent
 Citrate/TBST-5%NGS
 Flow Cytometry 1:25

For application specific protocols please see the web page for this product at www.cellsignal.com.

Companion Products:

- Phototope[®]-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
- Anti-rabbit IgG, HRP-linked Antibody #7074
- Prestained Protein Marker, Broad Range (Premixed Format) #7720
- Biotinylated Protein Ladder Detection Pack #7727
- 20X LumiGLO[®] Reagent and 20X Peroxide #7003

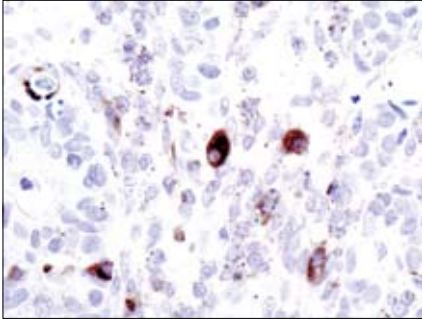
Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

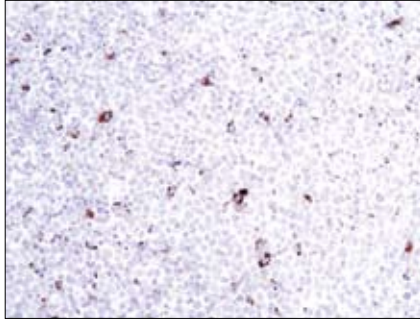
- (1) Faust, P.L. et al. (1985) *Proc. Natl. Acad. Sci. USA* 82, 4910-4914.
- (2) Erickson, A.H. et al. (1981) *J. Biol. Chem.* 256, 11224-11231.
- (3) Liaudet-Coopman, E. et al. (2006) *Cancer Lett.* 237, 167-179.
- (4) Berchem, G. et al. (2002) *Oncogene* 21, 5951-5955.
- (5) Nomura, T. and Katunuma, N. (2005) *J. Med. Invest.* 52, 1-9.
- (6) Garcia, M. et al. (1996) *Stem Cells* 14, 642-660.
- (7) Nogami, M. et al. (2000) *Histochem. J.* 32, 505-508.
- (8) Nakanishi, H. (2003) *Ageing Res. Rev.* 2, 367-381.
- (9) Callahan, L.M. et al. *Neurobiol. Aging* 19, S99-105.

IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

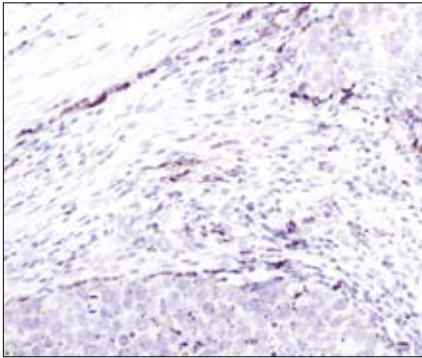
Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebra fish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% sequence homology.



Immunohistochemical analysis of paraffin-embedded human serous adenocarcinoma using Cathepsin D Antibody.



Immunohistochemical analysis of paraffin-embedded human Non-Hodgkin's lymphoma using Cathepsin D Antibody.



Immunohistochemical analysis of paraffin-embedded human lung carcinoma using Cathepsin D Antibody