

#2284 Store at -20°C

Cathepsin D Antibody

100 μl
 (10 western blots)



Orders ■ 877-616-CELL (2355)
 orders@cellsignaling.com
Support ■ 877-678-TECH (8324)
 info@cellsignaling.com
Web ■ www.cellsignaling.com

rev. 09/16/10

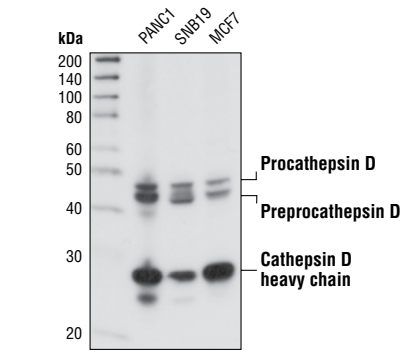
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

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

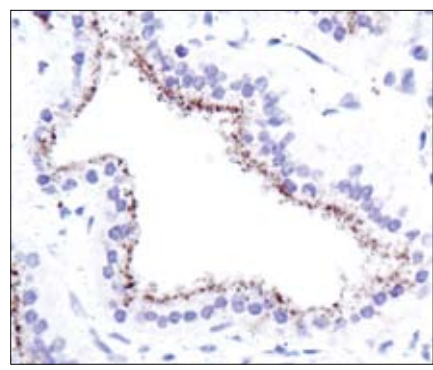
Background: Cathepsin D is a ubiquitously expressed lysosomal aspartyl protease involved in the normal degradation of proteins (1). It is synthesized as an inactive 43 kDa procathepsin D that is cleaved and glycosylated to form a 46 kDa procathepsin D and then further cleaved to produce 28 kDa and 15 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 procathepsin D, procathepsin D and the heavy chain subunit of mature cathepsin D.

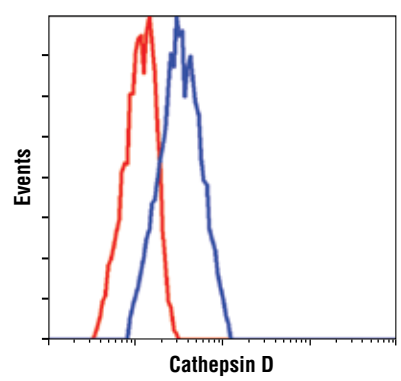
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues with the heavy chain subunit of human Cathepsin D. Antibodies are purified by protein A and peptide affinity chromatography.



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)	1:200†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114
† Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.	
Flow Cytometry	1:200

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

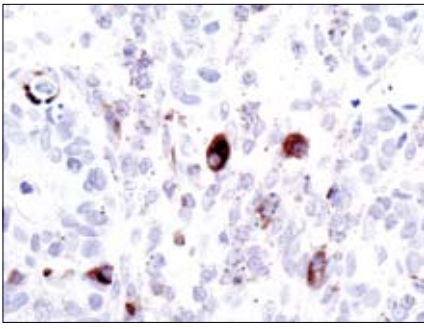
Please visit www.cellsignaling.com for a complete listing of recommended companion products.

Background References:

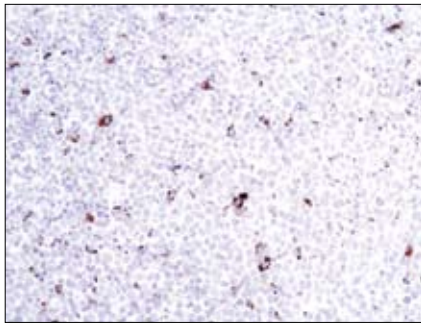
- (1) Faust, P.L. et al. (1985) *Proc. Natl. Acad. Sci. USA* 82, 4910–4914.
- (2) Erickson, A.H. et al. (1981) *J. Biol. Chem.* 256, 11224–11231.
- (3) Liaudet-Coopman, E. et al. (2006) *Cancer Lett.* 237, 167–179.
- (4) Berchem, G. et al. (2002) *Oncogene* 21, 5951–5955.
- (5) Nomura, T. and Katunuma, N. (2005) *J. Med. Invest.* 52, 1–9.
- (6) Garcia, M. et al. (1996) *Stem Cells* 14, 642–650.
- (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.

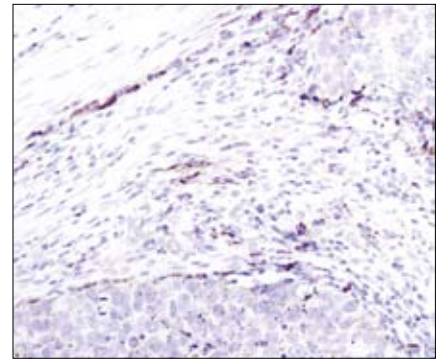
Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine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