

#3383 Store at -20C

Cathepsin B (H190) Antibody


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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M	Endogenous	39-42	Rabbit	#P07858	1508

Product Usage Information	Application Western Blotting	Dilution 1:1000
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	Cathepsin B (H190) Antibody detects endogenous levels of total cathepsin B protein. Cathepsin B (G60) Antibody #3373 produces a stronger signal for human cathepsin B on western blot, while Cathepsin B (H190) Antibody is preferred for the mouse protein.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly320 of human cathepsin B in a region that is conserved in mouse and rat. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	Cathepsin B (CSTB), part of the papain family of proteases, is a widely expressed lysosomal cysteine endopeptidase (1,2). Cathepsin B is produced from a larger precursor form, pro-cathepsin B, which runs at approximately 44 kDa on SDS-PAGE, and is proteolytically processed and glycosylated to form a mature two-chain protein containing a heavy chain (running at 27 and 24 kDa) and a light chain (5 kDa). High levels of cathepsin B are found in macrophages and osteoclasts, as well as various types of cancer cells, including lung, colon, prostate, breast, and stomach. In addition, expression of cathepsin B has been associated with multiple sclerosis (3), rheumatoid arthritis (4), and pancreatitis (5). While generally localized to lysosomes, in cancer alterations can lead to its secretion (6). Its role in tumor progression is thought to involve promotion of basement membrane degradation, invasion and metastasis (7,8). Expression can correlate with poor prognosis for a variety of forms of cancer (9-13). This product detects a SARS-CoV-2-related target for research into the mechanisms of the Novel Coronavirus, which has caused the COVID-19 pandemic.	
Background References	<ol style="list-style-type: none"> Chan, S.J. et al. (1986) <i>Proc Natl Acad Sci USA</i> 83, 7721-5. Fong, D. et al. (1986) <i>Proc Natl Acad Sci USA</i> 83, 2909-13. Bever, C.T. et al. (1994) <i>Neurology</i> 44, 745-8. Hashimoto, Y. et al. (2001) <i>Biochem Biophys Res Commun</i> 283, 334-9. Halangk, W. et al. (2000) <i>J Clin Invest</i> 106, 773-81. Berquin, I.M. and Sloane, B.F. (1996) <i>Adv Exp Med Biol</i> 389, 281-94. Yan, S. et al. (1998) <i>Biol Chem</i> 379, 113-23. Vasiljeva, O. et al. (2006) <i>Cancer Res</i> 66, 5242-50. Campo, E. et al. (1994) <i>Am J Pathol</i> 145, 301-9. Foekens, J.A. et al. (1998) <i>J Clin Oncol</i> 16, 1013-21. Werle, B. et al. (1999) <i>Br J Cancer</i> 81, 510-9. Lah, T.T. et al. (2000) <i>Clin Cancer Res</i> 6, 578-84. Werle, B. et al. (2000) <i>Cancer</i> 89, 2282-91. 	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting
Cross-Reactivity Key	

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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