

# Cathepsin B (H190) Antibody (Mouse Preferred)

✓ 100 µl  
(10 western blots)

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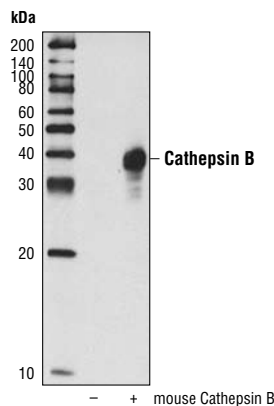
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications W Endogenous	Species Cross-Reactivity*		Molecular Wt. 39-42 kDa	Source Rabbit**
	H, M			

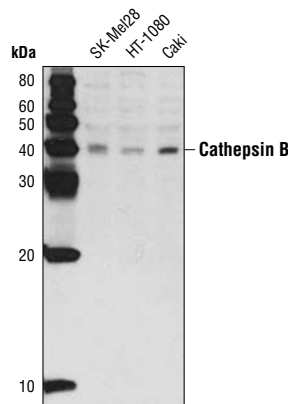
**Background:** Cathepsin B (CSTB), part of the papain family of proteases, is a widely expressed lysosomal cysteine endopeptidase (1,2). Like other family members, cathepsin B is produced from a larger precursor form, pro-cathepsin B, which in its glycosylated form runs at approximately 40 kDa on SDS-PAGE, and is then activated by cleavage of a 62-amino acid pro-peptide. 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).

**Specificity/Sensitivity:** Cathepsin B (H190) Antibody (Mouse Preferred) 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 His190 of human cathepsin B in a region that is conserved in mouse and rat. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of HeLa cells, mock transfected or transfected with mouse cathepsin B, using Cathepsin B (H190) Antibody.



Western blot analysis of extracts from various cell lines using Cathepsin B (H190) Antibody.

Entrez-Gene ID #1508  
Swiss-Prot Acc. #P07858

**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.

\*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

For application specific protocols please see the web page for this product at [www.cellsignaling.com](http://www.cellsignaling.com).

Please visit [www.cellsignaling.com](http://www.cellsignaling.com) for a complete listing of recommended companion products.

#### Background References:

- (1) Chan, S.J. et al. (1986) *Proc Natl Acad Sci USA* 83, 7721-5.
- (2) Fong, D. et al. (1986) *Proc Natl Acad Sci USA* 83, 2909-13.
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- (6) Berquin, I.M. and Sloane, B.F. (1996) *Adv Exp Med Biol* 389, 281-94.
- (7) Yan, S. et al. (1998) *Biol Chem* 379, 113-23.
- (8) Vasiljeva, O. et al. (2006) *Cancer Res* 66, 5242-50.
- (9) Campo, E. et al. (1994) *Am J Pathol* 145, 301-9.
- (10) Foekens, J.A. et al. (1998) *J Clin Oncol* 16, 1013-21.
- (11) Werle, B. et al. (1999) *Br J Cancer* 81, 510-9.
- (12) Lah, T.T. et al. (2000) *Clin Cancer Res* 6, 578-84.
- (13) Werle, B. et al. (2000) *Cancer* 89, 2282-91.

**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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.