

## DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human Cathepsin X/Z/P in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human Cathepsin C is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Cathepsin X/Z/P Ala21-Val303 (Gly23Val, Ser48Thr) Accession # Q9UBR2
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

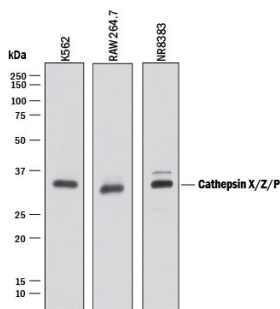
## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunohistochemistry</b>	3-15 µg/mL	See Below
<b>Immunoprecipitation</b>	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Cathepsin X/Z/P (Catalog # 934-CY), see our available <a href="#">Western blot detection antibodies</a>
<b>Simple Western</b>	5 µg/mL	See Below

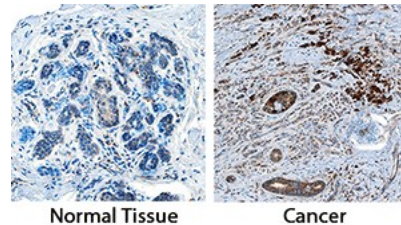
## DATA

### Western Blot



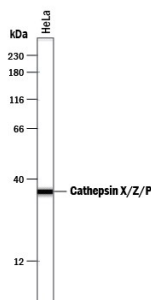
**Detection of Human, Mouse, and Rat Cathepsin X/Z/P by Western Blot.** Western blot shows lysates of K562 human chronic myelogenous leukemia cell line, RAW 264.7 mouse monocyte/macrophage cell line, and NR8383 rat alveolar macrophage cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human/Mouse/Rat Cathepsin X/Z/P Antigen Affinity-purified Polyclonal Antibody (Catalog # AF934) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for Cathepsin X/Z/P at approximately 34 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 1](#).

### Immunohistochemistry



**Cathepsin X/Z/P in Human Breast and Breast Cancer Tissue.** Cathepsin X/Z/P was detected in immersion fixed paraffin-embedded sections of normal human breast and breast cancer tissue using Goat Anti-Human/Mouse/Rat Cathepsin X/Z/P Antigen Affinity-purified Polyclonal Antibody (Catalog # AF934) at 3 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to stromal and endothelial cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

### Simple Western



**Detection of Human Cathepsin X/Z/P by Simple Western™.** Simple Western lane view shows lysates of HeLa human cervical epithelial carcinoma cell line, loaded at 0.2 mg/mL. A specific band was detected for Cathepsin X/Z/P at approximately 36 kDa (as indicated) using 5 µg/mL of Goat Anti-Human/Mouse/Rat Cathepsin X/Z/P Antigen Affinity-purified Polyclonal Antibody (Catalog # AF934) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Cathepsin X (also known as Cathepsin Z and P) is a cysteine protease of the papain family (1-5). Compared to other members of the papain family, Cathepsin X has a short proregion and unique insertions. The cysteine residue in the proregion forms a covalent and reversible bond with the active site cysteine residue (6). Acting as a carboxypeptidase, Cathepsin X displays a unique specificity (7-10). It is ubiquitously expressed in human tissues and conserved in other species such as mouse, nematode and echinuran. The nematode enzyme is apparently involved in molting of third stage larvae (11).

### References:

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