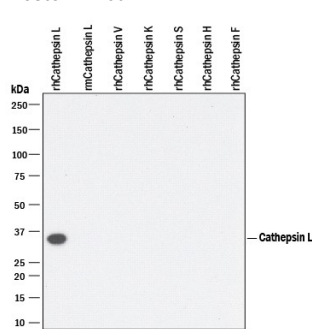
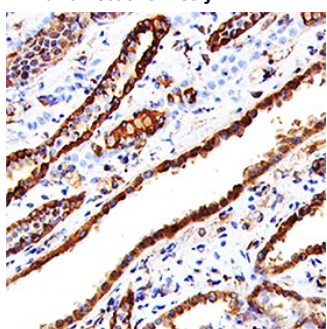


DESCRIPTION	
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Cathepsin L in ELISAs and Western blots. In sandwich immunoassays, less than 0.2% cross-reactivity with recombinant mouse Cathepsin L, recombinant human (rh) Cathepsin A, rhCathepsin B, rhCathepsin C, rhCathepsin D, rhCathepsin E, rhCathepsin S, and rhCathepsin V 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 L Glu113-Val333 Accession # P07711
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<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 either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS		
<b>Please Note:</b> Optimal dilutions should be determined by each laboratory for each application. <i>General Protocols</i> are available in the <i>Technical Information</i> section on our website.		
	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below
<b>Immunoprecipitation</b>	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Cathepsin L (Catalog # 952-CY), see our available Western blot detection antibodies
<b>Human Cathepsin L Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	0.2-0.8 µg/mL	Human Cathepsin L Antibody (Catalog # AF952)
<b>ELISA Detection</b>	0.1-0.4 µg/mL	Human Cathepsin L Biotinylated Antibody (Catalog # BAF952)
<b>Standard</b>		Recombinant Human Cathepsin L (Catalog # 952-CY)

DATA	
<p><b>Western Blot</b></p>  <p><b>Detection of Recombinant Human Cathepsin L by Western Blot.</b> Western blot shows 10 ng of Recombinant Human Cathepsin L (Catalog # 952-CY), Recombinant Mouse Cathepsin L (Catalog # 1515-CY), Recombinant Human Cathepsin V (Catalog # 1080-CY), Recombinant Human Cathepsin K, Recombinant Human Cathepsin S (Catalog # 1183-CY), Recombinant Human Cathepsin H (Catalog # 7516-CY), and Recombinant Human Cathepsin F. PVDF Membrane was probed with 0.1 µg/mL of Goat Anti-Human Cathepsin L Antigen Affinity-purified Polyclonal Antibody (Catalog # AF952) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for Cathepsin L at approximately 35 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 3.</p>	<p><b>Immunohistochemistry</b></p>  <p><b>Cathepsin L in Human Kidney.</b> Cathepsin L was detected in immersion fixed paraffin-embedded sections of human kidney using Goat Anti-Human Cathepsin L Antigen Affinity-purified Polyclonal Antibody (Catalog # AF952) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to convoluted tubules. View our protocol for <a href="#">Chromogenic IHC Staining of Paraffin-embedded Tissue Sections</a>.</p>

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 L is a lysosomal cysteine protease expressed in most eukaryotic cells. Cathepsin L is known to hydrolyze a number of proteins, including the proform of urokinase-type plasminogen activator, which is activated by Cathepsin L cleavage (1). Cathepsin L has also been shown to proteolytically inactivate  $\alpha_1$ -antitrypsin and secretory leucoprotease inhibitor, two major protease inhibitors of the respiratory tract (2). These observations, combined with the demonstration of increased Cathepsin L activity in the epithelial lining fluid of the lungs of emphysema patients, have led to the suggestion that the enzyme may be involved in the progression of this disease. Cathepsin L has also been identified as a major excreted protein of transformed fibroblasts, indicating the enzyme could be involved in malignant tumor growth (3). Human Cathepsin L activity is greatest under mildly acidic conditions, from pH 4.5-6.5. The stability of the enzyme decreases at higher pH values.

## References:

1. Goretzki, L. *et al.* (1992) FEBS Lett. **297**:112.
2. Taggart, C.C. *et al.* (2001) J. Biol. Chem. **276**:33345.
3. Gottesman, M.M. and F. Cabral (1981) Biochemistry **20**:1659.