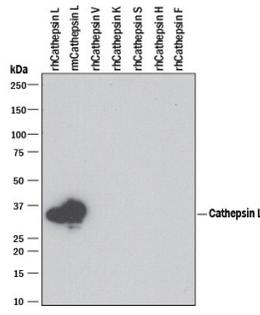
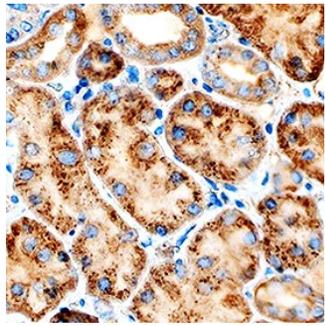
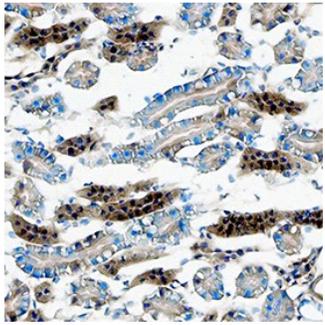


DESCRIPTION	
<b>Species Reactivity</b>	Human/Mouse
<b>Specificity</b>	Detects human and mouse Cathepsin L in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human Cathepsin B, C, L2, O, S, or X/Z/P is observed. In Western blots, both the pro and active forms of recombinant human and mouse Cathepsin L are recognized.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 204101
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Cathepsin L Glu113-Val333 Accession # P07711
<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		
<i>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.</i>		
	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunohistochemistry</b>	5-25 µg/mL	See Below
<b>Immunoprecipitation</b>	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Cathepsin L (Catalog # 952-CY) or Recombinant Mouse Cathepsin L (Catalog # 1515-CY), see our available <a href="#">Western blot detection antibodies</a> . This antibody did not immunoprecipitate the pro form of recombinant mouse Cathepsin L.

DATA	
<p><b>Western Blot</b></p>  <p><b>Detection of Recombinant Human and Mouse Cathepsin L by Western Blot.</b> Western blot shows 100 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 1 µg/mL of Rat Anti-Human/Mouse Cathepsin L Monoclonal Antibody (Catalog # MAB9521) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). 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. For natural samples, we recommend the use of Catalog # AF1515.</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 Rat Anti-Human/Mouse Cathepsin L Monoclonal Antibody (Catalog # MAB9521) at 5 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Rat HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS017) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in tubular epithelial cells. View our protocol for <a href="#">Chromogenic IHC Staining of Paraffin-embedded Tissue Sections</a>.</p>
<p><b>Immunohistochemistry</b></p>  <p><b>Cathepsin L in Mouse Kidney.</b> Cathepsin L was detected in immersion fixed frozen sections of mouse kidney using Rat Anti-Human/Mouse Cathepsin L Monoclonal Antibody (Catalog # MAB9521) at 8 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Rat HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS017) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in tubular epithelial cells. View our protocol for <a href="#">Chromogenic IHC Staining of Frozen Tissue Sections</a>.</p>	

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 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>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <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).

### 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.