**DESCRIPTION**

**Species Reactivity**
Human

**Specificity**
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.

**Source**
Polyclonal Goat IgG

**Purification**
Antigen Affinity-purified

**Immunogen**
Mouse myeloma cell line NS0-derived recombinant human Cathepsin L Glu113-Val333

**Accession #**
P07711

**Endotoxin Level**
<0.10 EU per 1 μg of the antibody by the LAL method.

**Formulation**
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**

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.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Recommended Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Blot</td>
<td>0.1 μg/mL</td>
</tr>
<tr>
<td>Immunohistochemistry</td>
<td>5-15 μg/mL</td>
</tr>
<tr>
<td>Immunoprecipitation</td>
<td>25 μg/mL</td>
</tr>
</tbody>
</table>

**Human Cathepsin L Sandwich Immunoassay**

<table>
<thead>
<tr>
<th>Sample</th>
<th>Reagent</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELISA Capture</td>
<td>0.2-0.8 μg/mL Human Cathepsin L Antibody (Catalog # AF952)</td>
</tr>
<tr>
<td>ELISA Detection</td>
<td>0.1-0.4 μg/mL Human Cathepsin L Biotinylated Antibody (Catalog # BAF952)</td>
</tr>
<tr>
<td>Standard</td>
<td>Recombinant Human Cathepsin L (Catalog # 952-CY)</td>
</tr>
</tbody>
</table>

**DATA**

**Western Blot**

Detection of Recombinant Human Cathepsin L by Western Blot. 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.

**Immunohistochemistry**

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 & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to convoluted tubules. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

**PREPARATION AND STORAGE**

**Reconstitution**
Reconstitute at 0.2 mg/mL in sterile PBS.

**Shipping**
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

**Stability & Storage**
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.
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 α₁-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: