# Mouse Cathepsin D Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1029

## DESCRIPTION

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|---|---|
| **Species Reactivity** | Mouse |
| **Specificity** | Detects mouse Cathepsin D in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant human (rh) Cathepsin D is observed and less than 1% cross-reactivity with rhCathepsin A, B, C, L, X, and recombinant mouse (rm) Cathepsin B, C, H, and X is observed. In Western blots, approximately 100% cross-reactivity with rhCathepsin D is observed and less than 1% cross-reactivity with rmCathepsin E is observed. |
| **Source** | Polyclonal Goat IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | Mouse myeloma cell line NS0-derived recombinant mouse Cathepsin D<br>Ile21-Leu410<br>Accession # Q3UCD9 |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. |

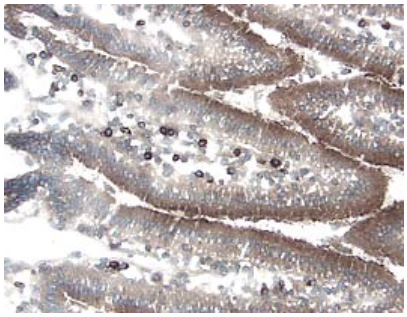
## APPLICATIONS

**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 |
|---|---|---|
| **Western Blot** | 0.1 µg/mL | Recombinant Mouse Cathepsin D (Catalog # 1029-AS) |
| **Immunohistochemistry** | 5-15 µg/mL | See Below |
| **Immunoprecipitation** | 25 µg/mL | Conditioned cell culture medium spiked with Recombinant Mouse Cathepsin D (Catalog # 1029-AS), see our available Western blot detection antibodies |

## DATA

**Immunohistochemistry**



**Cathepsin D in Mouse Intestine.** Cathepsin D was detected in perfusion fixed frozen sections of mouse intestine using 15 µg/mL Goat Anti-Mouse Cathepsin D Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1029) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counter-stained with hematoxylin (blue). Specific labeling was localized to epithelial cells in intestinal villi. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

## PREPARATION AND STORAGE

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

## BACKGROUND

Cathepsin D is a lysosomal aspartic protease of the pepsin family (4). Mouse Cathepsin D is synthesized as a precursor protein, consisting of a signal peptide (residues 1-20), a propeptide (residues 21-64), and a mature chain (residues 65-410) (1-3). It is expressed in most cells and over-expressed in breast cancer cells (5). It is a major enzyme in protein degradation in lysosomes, and also involved in the presentation of antigenic peptides. Mice deficient in this enzyme showed a progressive atrophy of the intestinal mucosa, a massive destruction of lymphoid organs, and a profound neuronal ceroid lipofucinosis, indicating that Cathepsin D is essential for proteolysis of proteins regulating cell growth and tissue homeostasis (6). Cathepsin D secreted from human prostate carcinoma cells is responsible for the generation of angiostatin, a potent endogeneous inhibitor of angiogenesis (6).

**References:**


1. Diedrich, *et al.* (1990) Nucl. Acid Res. **18**:7184.
2. Grusby, *et al.* (1990) Nucl. Acid Res. **18**:4008.
3. Hetman, *et al.* (1994) DNA Cell Biol. **13**:419.
4. Conner, (2004) in *Handbook of Proteolytic Enzymes* (Barrett, *et al.* eds) Elsevier Academic Press, San Diego, p. 43.
5. Rochefort, *et al.* (2000) Clin. Chim. Acta. **291**:157.
6. Tsukuba, *et al.* (2000) Mol. Cells **10**:601.