

**Anti-Cathepsin K Picoband Antibody**  
**Catalog # ABO12542****Specification**

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**Anti-Cathepsin K Picoband Antibody - Product Information**

Application	<b>WB, IHC-P</b>
Primary Accession	<a href="#">P43235</a>
Host	<b>Rabbit</b>
Reactivity	<b>Human</b>
Clonality	<b>Polyclonal</b>
Format	<b>Lyophilized</b>

**Description**

Rabbit IgG polyclonal antibody for Cathepsin K(CTSK) detection. Tested with WB, IHC-P in Human.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-Cathepsin K Picoband Antibody - Additional Information**

**Gene ID** 1513

**Other Names**

Cathepsin K, 3.4.22.38, Cathepsin O, Cathepsin O2, Cathepsin X, CTSK, CTSO, CTSO2

**Calculated MW**

36966 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat<br><br>Western blot, 0.1-0.5 µg/ml, Human<br>

**Subcellular Localization**

Lysosome.

**Tissue Specificity**

Predominantly expressed in osteoclasts (bones).

**Protein Name**

Cathepsin K

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**Immunogen**

E. coli-derived human Cathepsin K recombinant protein (Position: A115-M329). Human Cathepsin K shares 86.9% and 88.8% amino acid (aa) sequence identity with mouse and rat Cathepsin K, respectively.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins.

**Storage**

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Anti-Cathepsin K Picoband Antibody - Protein Information**

**Name** CTSK

**Synonyms** CTSO, CTSO2

**Function**

Thiol protease involved in osteoclastic bone resorption and may participate partially in the disorder of bone remodeling. Displays potent endoprotease activity against fibrinogen at acid pH. May play an important role in extracellular matrix degradation. Involved in the release of thyroid hormone thyroxine (T4) by limited proteolysis of TG/tyroglobulin in the thyroid follicle lumen (PubMed:<a href="http://www.uniprot.org/citations/11082042" target="\_blank">11082042</a>).

**Cellular Location**

Lysosome. Secreted. Apical cell membrane; Peripheral membrane protein; Extracellular side. Note=Localizes to the lumen of thyroid follicles and to the apical membrane of thyroid epithelial cells

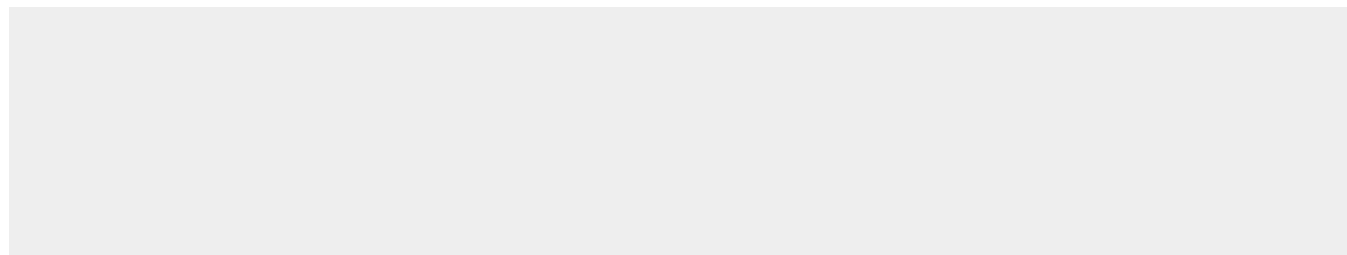
**Tissue Location**

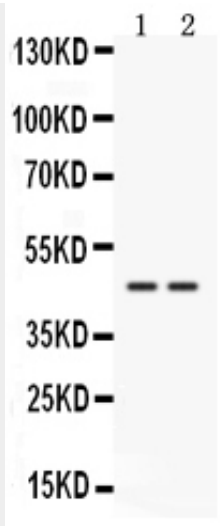
Predominantly expressed in osteoclasts (bones) (PubMed:7805878). Expressed in thyroid epithelial cells (PubMed:11082042).

**Anti-Cathepsin K Picoband Antibody - Protocols**

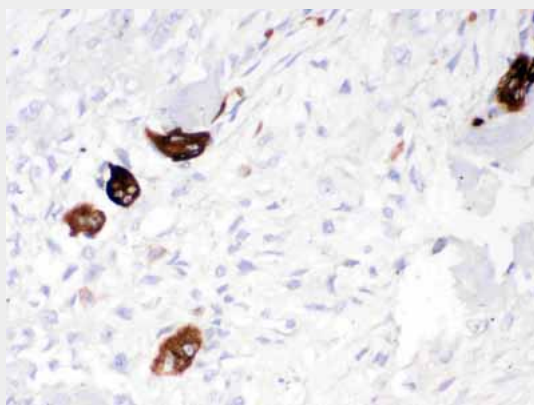
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Anti-Cathepsin K Picoband Antibody - Images**



Western blot analysis of Cathepsin K expression in HELA whole cell lysates (lane 1) and 22RV1 whole cell lysates (lane 2). Cathepsin K at 45KD was detected using rabbit anti- Cathepsin K Antigen Affinity purified polyclonal antibody (Catalog # ABO12542) at 0.5 µg/mL. The blot was developed using chemiluminescence (ECL) method .



Cathepsin K was detected in paraffin-embedded sections of human osteosarcoma tissues using rabbit anti- Cathepsin K Antigen Affinity purified polyclonal antibody (Catalog # ABO12542) at 1 µg/mL. The immunohistochemical section was developed using SABC method .

#### **Anti-Cathepsin K Picoband Antibody - Background**

Cathepsin K, abbreviated CTSK, is an enzyme that in humans is encoded by the CTSK gene. It is mapped to 1q21. The protein encoded by this gene is a lysosomal cysteine protease involved in bone remodeling and resorption. And this protein, which is a member of the peptidase C1 protein family, is expressed predominantly in osteoclasts. Additionally, the enzyme's ability to catabolize elastin, collagen, and gelatin allow it to break down bone and cartilage. This catabolic activity is also partially responsible for the loss of lung elasticity and recoil in emphysema. Cathepsin K inhibitors, such as odanacatib, show great potential in the treatment of osteoporosis. Cathepsin K is degraded by Cathepsin S, called Controlled Cathepsin Cannibalism.