

Anti-Cathepsin K Picoband Antibody

Catalog # ABO12542

Product Information

Application	WB, IHC-P
Primary Accession	P43235
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
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.

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
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 μ g/ml, Human, By Heat Western blot, 0.1-0.5 μ g/ml, Human
Subcellular Localization	Lysosome.
Tissue Specificity	Predominantly expressed in osteoclasts (bones).
Source	Eukaryota
Protein Name	Cathepsin K
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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.
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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/thyroglobulin in the thyroid follicle lumen (PubMed: 11082042).
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).

Background

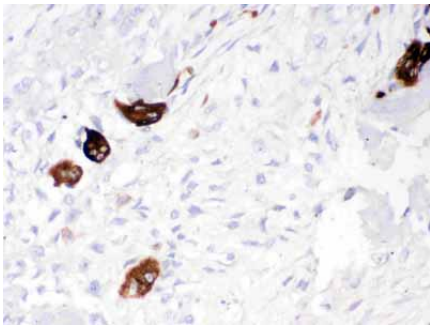
Cathepsin K, abbreviated CTSK, is an enzyme that in humans is encoded by the CTSK gene. It is mapped to 1q21. The protein encoded by this gene is a lysosomal cysteine protease involved in bone remodeling and resorption. And this protein, which is a member of the peptidase C1 protein family, is expressed 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.

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 .



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