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CTSK Antibody (Center R222)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7381c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P43235
Other Accession	P43236, Q9GLE3, P61276, Q5E968
Reactivity	Human, Mouse
Predicted	Rabbit, Monkey, Pig, Bovine, Rat, Canine, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB19254
Calculated MW	36966
Antigen Region	207-237

Additional Information

Gene ID	1513
Other Names	Cathepsin K, Cathepsin O, Cathepsin O2, Cathepsin X, CTSK, CTSO, CTSO2
Target/Specificity	This CTSK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 207-237 amino acids from the Central region of human CTSK.
Dilution	WB~~1:2000 IHC-P~~1:100 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CTSK Antibody (Center R222) is for research use only and not for use in diagnostic or therapeutic procedures.

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).

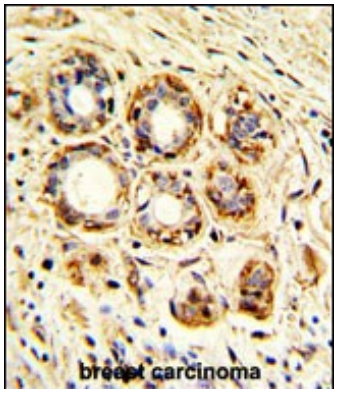
Background

The protein encoded by this gene is a lysosomal cysteine proteinase involved in bone remodeling and resorption. This protein, which is a member of the peptidase C1 protein family, is predominantly expressed in osteoclasts. However, the encoded protein is also expressed in a significant fraction of human breast cancers, where it could contribute to tumor invasiveness. Mutations in this gene are the cause of pycnodysostosis, an autosomal recessive disease characterized by osteosclerosis and short stature. This gene may be subject to RNA editing.

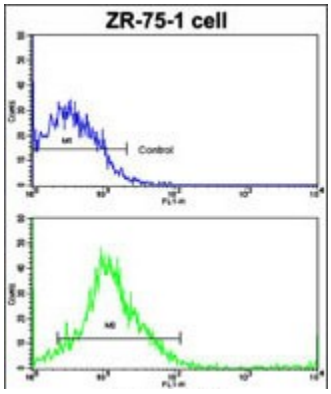
References

Lendeckel,U., Neurochem. Int. 54 (7), 410-417 (2009)

Images

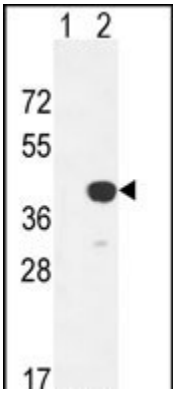


Formalin-fixed and paraffin-embedded human breast carcinoma with CTSK Antibody (Center R222), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of ZR-75-1 cells using CTSK Antibody (Center R222)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Western blot analysis of CTSK (arrow) using rabbit polyclonal CTSK Antibody (Center R222) (Cat.#AP7381c).



293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the CTSK gene (Lane 2) .

Citations

- Histone H3K18 lactylation: An exercise-induced epigenetic mechanism that inhibits osteoclast activity and protects against osteoporosis.
- Circular RNA atlas in osteoclast differentiation with and without alendronate treatment

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.