SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

[Primary Antibody]

Rabbit Anti-Cathepsin K antibody

Catalog Number: SL1611R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Cathepsin K
Immunogen:	KLH conjugated synthetic peptide derived from human Cathepsin K: 112-210/329
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	WB=1:500-2000 IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Mouse(predicted:Human,Rat,Dog,Pig,Cow,Horse,GuineaPig)
Predicted MW.:	36kDa
Subcellular Location:	cytoplasmic
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. [provided by RefSeq, Jul 2008]. **Function:** Closely 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

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	role in extracellular matrix degradation. **Subunit:** Belongs to the peptidase C1 family. **Subcellular Location:** Lysosome. **Tissue Specificity:** Tissue specificityPredominantly expressed in osteclasts (bones). DISEASE: Defects in CTSK are the cause of pycnodysostosis (PKND) [MIM:265800]. PKND is an autosomal recessive osteochondrodysplasia characterized by osteosclerosis and short stature. **Similarity:** Belongs to the peptidase C1 family. **Database links:** **Entrez Gene:** 1513 Human **Entrez Gene:** 13038 Mouse **Entrez Gene:** 29175 Rat Omim: 601105 Human **SwissProt:** P43235 Human **SwissProt:** P55097 Mouse **SwissProt:** O35186 Rat **Unigene:** 632466 Human **Unigene:** 272085 Mouse **Unigene:** 5598 Rat Synthesis and Degradation（Synthesis and Degradation） Cathepsin K is a member of the cysteine protease family, and it shares high homology with cathepsins S, L, and B. In the cardiovascular field: Cathepsin K participates in many pathophysiological processes of the cardiovascular system, including atherosclerosis, vascular remodeling and regeneration, as well as aneurysm growth, rupture, and aortic valve stenosis, in which it is one of the major collagenases. In bone and joint: Cathepsin K is mainly located in osteoclasts and is the major enzyme involved in bone resorption, and is associated with osteoporosis and decalcification. It can induce insulin-secreting β cells.

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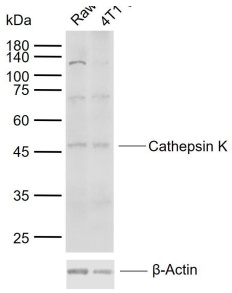
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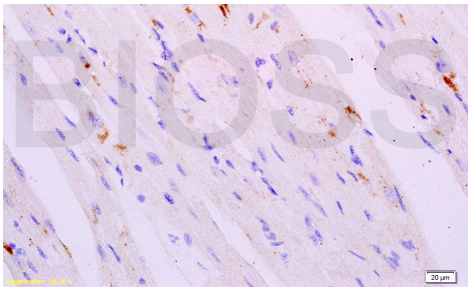
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[VALIDATION IMAGES]





Sample:
Lane 1: Mouse Raw264.7 cell lysates
Lane 2: Mouse 4T1 cell lysates
Primary: Anti-Cathepsin K (SL1611R) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 36 kDa
Observed band size: 46 kDa

Tissue/cell: mouse heart tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (Mouse(predicted:Human,Rat,Dog,Pig,Cow,Horse,GuineaPig)1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-Cathepsin K Polyclonal Antibody, Unconjugated(SL1611R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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