

## Basic Information

Product Name	Anti-Cathepsin K/CTSK Antibody	
Gene Name	CTSK	
Source	Rabbit	
Clonality	Polyclonal	
Isotype	IgG	
Species Reactivity	human, mouse, rat	
Tested Application	WB, IHC	
Contents	500 ug/ml antibody with PBS, 0.02% NaN <sub>3</sub> , 1 mg/ml BSA and 50% glycerol.	
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.	
Concentration	500 ug/ml	
Purification	Immunogen affinity purified.	
Observed MW	45 kDa	
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 (Boiling the paraffin sections in 10mM citrate buffer, pH6.0, or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.	

## Storage

12 months from date of receipt, -20°C as supplied.

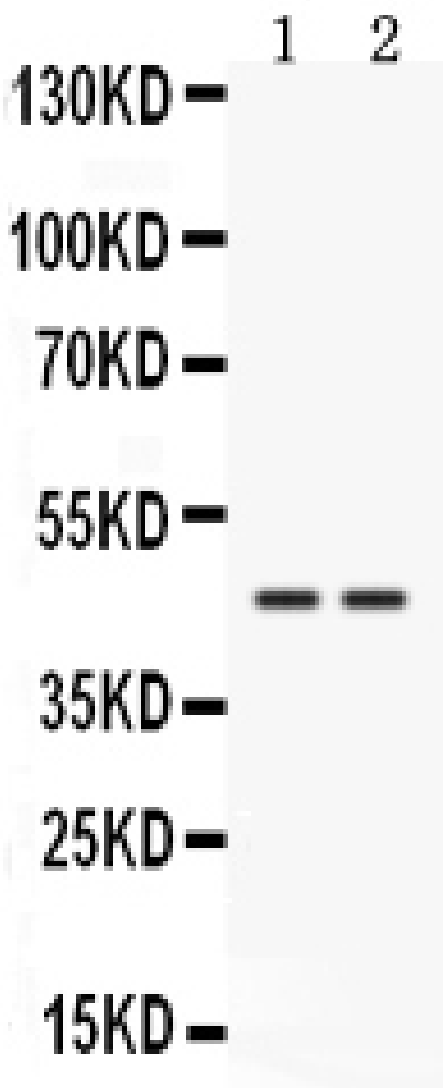
## Background Information

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.

## Reference

Anti-Cathepsin K/CTSK Antibody被引用在6文献中。

## Selected Validation Data

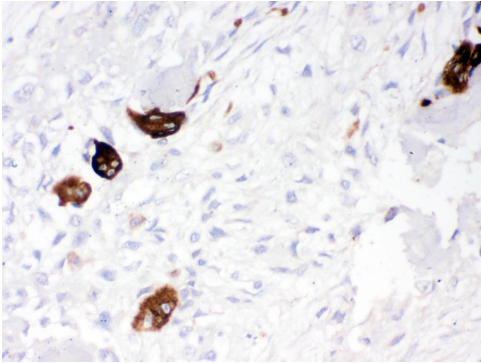


Western blot analysis of Cathepsin K/CTSK using anti-Cathepsin K/CTSK antibody (PB9856). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human Hela whole cell lysates,

Lane 2: human 22RV1 whole cell lysates.

After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-Cathepsin K/CTSK antigen affinity purified polyclonal antibody (PB9856) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for Cathepsin K/CTSK at approximately 45 kDa. The expected band size for Cathepsin K/CTSK is at 37 kDa.



IHC analysis of Cathepsin K/CTSK using anti-Cathepsin K/CTSK antibody (PB9856).

Cathepsin K/CTSK was detected in a paraffin-embedded section of human osteosarcoma tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was incubated with rabbit anti-Cathepsin K/CTSK Antibody (PB9856) at a dilution of 1:200 and developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB (Catalog # AR1027) as the chromogen.