

Anti-Cathepsin K antibody [3F9] ab37259

 10 References |  3 Images

Overview

Product name	Anti-Cathepsin K antibody [3F9]
Description	Mouse monoclonal [3F9] to Cathepsin K
Tested applications	ELISA, WB, IP, IHC-P, Flow Cyt
Species reactivity	Reacts with: Human
Immunogen	Recombinant fusion protein, corresponding to amino acids 115-329 of Human Cathepsin K. The protein contains at the N-terminal end a His tag (6x) and 6 additional amino acid residues (MRGSHHHHHGS).
Epitope	The monoclonal antibody ab37259 (clone 3F9) reacts with an epitope located between aa 115-329: APDSVDYRKKGYVTPNQGGCGSCWAFSSVGALEGQLKKKTGKLLNLSPQNLVDCVSENDGC GGGYMTNAFYVQKNRGIDSEDAYPYVQEEESCMYNPTGKAAKCRGYREIPEGNEKALKRA VARVGPVSVDAIDSLTSFQFSKGVYYDESCNSDNLNHAFLAVGYGIQKGNKHWHIKNWGE NWGNKGYILMARNKNNACGIANLASFPKM

Properties

Form	Liquid
Storage instructions	Aliquot and store at -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Preservative: None Constituents: 0.1M Sodium chloride, 0.05M PBS, pH 7.2
Purity	Protein G purified
Clonality	Monoclonal
Clone number	3F9
Isotype	IgG2b

Applications

Our [Abpromise guarantee](#) covers the use of **ab37259** in the following tested applications.

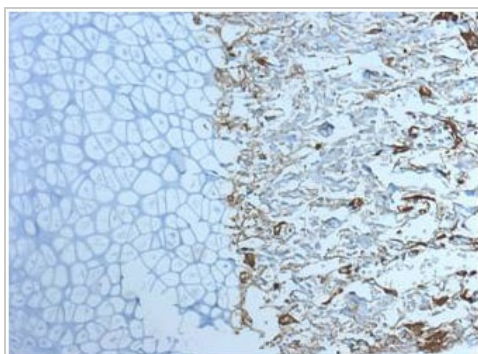
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ELISA		Use at an assay dependent concentration.
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 37, 40 kDa (predicted molecular weight: 37 kDa).
IP		Use at an assay dependent concentration. PubMed: 24833013
IHC-P		Use at an assay dependent concentration.
Flow Cyt		Use 1µg for 10 ⁶ cells. Ab91366-Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Target

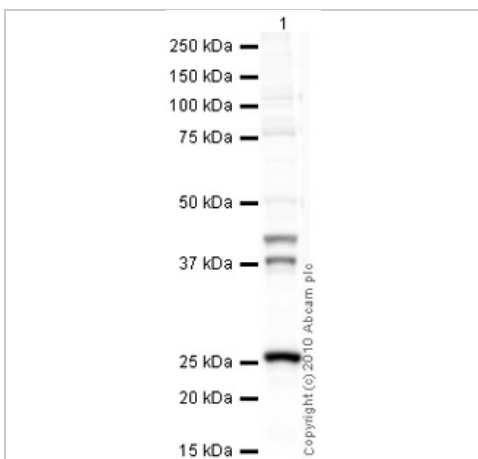
Function	Closely involved in osteoclastic bone resorption and may participate partially in the disorder of bone remodeling. Displays potent endoprotease activity against fibrinogen at acid pH. May play an important role in extracellular matrix degradation.
Tissue specificity	Predominantly expressed in osteoclasts (bones).
Involvement in disease	Defects in CTSK are the cause of pycnodysostosis (PKND) [MIM:265800]. PKND is an autosomal recessive osteochondrodysplasia characterized by osteosclerosis and short stature.
Sequence similarities	Belongs to the peptidase C1 family.
Cellular localization	Lysosome.

Anti-Cathepsin K antibody [3F9] images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Cathepsin K antibody [3F9] - Azide free (ab37259)

Bone from mouse foot (bone marrow with osteoclasts (positive)). IHC-P image was obtained after deparaffinization, antigen retrieval with 0.1 MEDTA(6-8 min, 72 C), drying of slide before staining (10 min, 62 C), and subsequent staining with primary antibody (1/100) in 1% horse serum (1 h, 37 C).



Western blot - Cathepsin K antibody [3F9] - Azide free (ab37259)

Anti-Cathepsin K antibody [3F9] (ab37259) at 1 µg/ml + Bone (Human) Tissue Lysate - tumor tissue (ab29359) at 10 µg

Secondary

Goat polyclonal Secondary Antibody to Mouse IgG - H&L (HRP), pre-adsorbed at 1/3000 dilution developed using the ECL technique

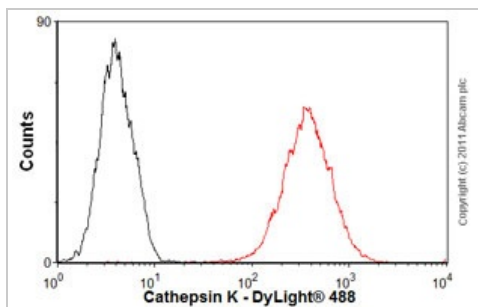
Performed under reducing conditions.

Predicted band size : 37 kDa

Observed band size : 37 + 40 kDa

Additional bands at : 26 kDa (possible cleavage fragment).

Exposure time : 1 minute



Flow Cytometry-Anti-Cathepsin K antibody [3F9] - Azide free(ab37259)

Overlay histogram showing U2OS cells stained with ab37259 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab37259, 1 μ g/1x10⁶ cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (ab91366, 2 μ g/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in U2OS cells fixed with 4% paraformaldehyde (10 min)/permeabilized in 0.1% PBS-Tween used under the same conditions.

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