

Anti-Cathepsin K antibody [3F9] ab37259

[32 References](#) [3 Images](#)

Overview

Product name	Anti-Cathepsin K antibody [3F9]
Description	Mouse monoclonal [3F9] to Cathepsin K
Host species	Mouse
Tested applications	Suitable for: WB, IHC-P, Flow Cyt
Species reactivity	Reacts with: Mouse, 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 (MRGSHHHHHHGS).
Epitope	The monoclonal antibody ab37259 (clone 3F9) reacts with an epitope located between aa 115-329: APDSVDYRKKGYVTPNQGCSCWAFSSVGALEGQLKKKTGKLLNLSPQNLVDCVSENDG C GGGYMTNAFQYVQKNRGIDSEDAYPYVQEEESCMYNPTGKAAKCRGYREIPEGNEKALKRA VARVGPVSVDAISLTSFQFSKGVYDESCNSDNLNHAFLAVGYGIQKGNKHWIKNSWGE NWXGKGYILMARNKNNACGIANLASFPKM
General notes	<p>This product was changed from ascites to tissue culture supernatant on 22nd December 2017. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle.
Storage buffer	Constituents: 0.58% Sodium chloride, 0.134% PBS
Purity	Protein G purified

Purification notes	Purified from tissue culture supernatant.
Clonality	Monoclonal
Clone number	3F9
Isotype	IgG2b

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab37259 in the following tested applications.

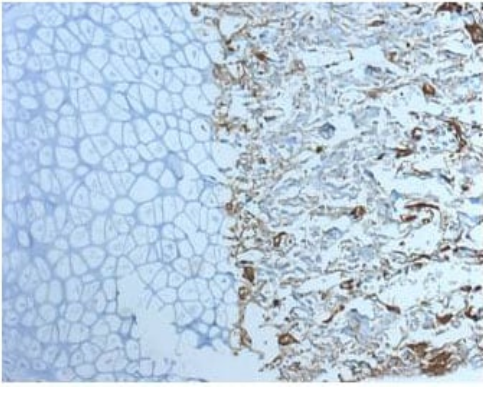
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 37, 40 kDa (predicted molecular weight: 37 kDa).
IHC-P		Use at an assay dependent concentration.
Flow Cyt		Use 1 µg for 10 ⁶ cells. ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Target

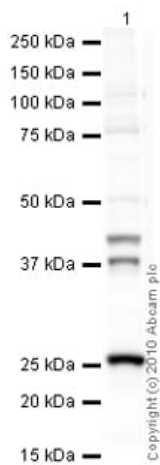
Function	Closely involved in osteoclastic bone resorption and may participate partially in the disorder of bone remodeling. Displays potent endoprotease activity against fibrinogen at acid pH. May play an important role in extracellular matrix degradation.
Tissue specificity	Predominantly expressed in 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.

Images



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

Bone from mouse foot (bone marrow with osteoclasts (positive)). IHC-P image was obtained after deparaffinization, antigen retrieval with 0.1 M EDTA (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 - Anti-Cathepsin K antibody [3F9] (ab37259)

Anti-Cathepsin K antibody [3F9] (ab37259) at 1 µg/ml + Human bone tumor tissue lysate - total protein (**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.

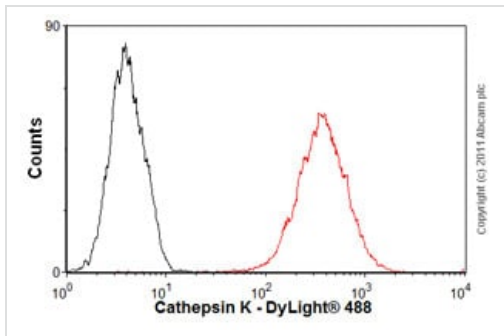
Predicted band size: 37 kDa

Observed band size: 37,40 kDa

Additional bands at: 26 kDa (possible cleavage fragment)

Exposure time: 1 minute

Cathepsin K contains a potential glycosylation site (SwissProt) which may explain its migration at a higher molecular weight than predicted, seen at 40 kDa. The band observed at 25 kDa could potentially be a cleaved form of Cathepsin K due to the presence of both a 15 amino acid signal prptide and a 99 amino acid propeptide. Cathepsin K in its mature form has an expected molecular weight of 25 kDa.



Flow Cytometry - Anti-Cathepsin K antibody [3F9] (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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