Product datasheet

Anti-Cathepsin K antibody ab19027

Overview

Product name: Anti-Cathepsin K antibody
Description: Rabbit polyclonal to Cathepsin K
Host species: Rabbit
Specificity: ab19027 recognises cathepsin K.

Tested applications: Suitable for: IHC-Fr, ICC/IF, WB, IHC-P
Species reactivity: Reacts with: Mouse, Rat, Human, Zebrafish
Immunogen: Synthetic peptide, corresponding to a region within amino acids 300-329 of Rat Cathepsin K which includes residue 321. (Peptide available as ab41720.)

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer: Preservative: 0.02% Thimerosal (merthiolate)
Constituents: 50% Glycerol, 1% BSA, PBS, pH 7.2
Purity: Protein A purified
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab19027 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>IHC-Fr</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>ICC/IF</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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<td>Notes</td>
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<tr>
<td>WB</td>
<td>★★★★☆☆</td>
<td>Use a concentration of 1 - 4 µg/ml. Detects a band of approximately 40, 29 kDa (predicted molecular weight: 37 kDa). Can be blocked with <a href="https://www.abcam.com/cathepsin-k-peptide-ab41720">Cathepsin K peptide (ab41720)</a>.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>★★★★★☆☆</td>
<td>Use at an assay dependent concentration.</td>
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**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**

- ab19027 staining Cathepsin K in mouse bone tissue section, in which human MDA-MB-231 Breast Cancer cells were grown, by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Tissue underwent paraformaldehyde fixation and then blocking with 10% Casein for 30 minutes at 22°C was performed. The primary antibody was diluted 1/200 and incubated with sample in 10% Casein for 17 hours at 4°C. A Biotin conjugated goat polyclonal to rabbit IgG was used as secondary antibody at 1/200 dilution.

This image is a courtesy of Anonymous Abreview.
Immunocytochemistry/Immunofluorescence - Anti-Cathepsin K antibody (ab19027)
This image is courtesy of an Abreview submitted by Alina Macovei

ab19027 staining Cathepsin K in the Human cell line HepaRG by ICC/IF (Immunocytochemistry/Immunofluorescence). Cells were fixed with formaldehyde, permeabilized with Triton X-100 0.1% and blocked with 1% milk for 30 minutes at 21°C. Samples were incubated with primary antibody (1µg/ml in 1% milk) for 30 minutes. An Alexa Fluor®594-conjugated Goat anti-rabbit IgG polyclonal(1/400) was used as the secondary antibody.

Immunohistochemistry (Frozen sections) - Anti-Cathepsin K antibody (ab19027)
Image courtesy of an anonymous Abreview.

ab19027 staining Cathepsin K in rat osteoclasts by Immunohistochemistry (Frozen sections). 21 day old rat bone was fixed in methanol and then blocked using 20% serum for 30 minutes at 22°C. Samples were then incubated with primary antibody at 1/50 for 3 hours at 22°C. The secondary antibody used was an anti-rabbit IgG conjugated to Cy3® (red) used at a 1/1000 dilution.

Immunocytochemistry/Immunofluorescence - Anti-Cathepsin K antibody (ab19027)
Image courtesy of an anonymous Abreview.

ab19027 staining Cathepsin K in cultured human osteoclasts by Immunocytochemistry/Immunofluorescence. Cells were fixed in paraformaldehyde, permeabilized using 0.1% Triton X-100 PBS, blocked with 1% BSA for 1 hour at 25°C and then incubated with ab19027 at 2µg/ml for 30 minutes at 25°C. The secondary used was a FITC conjugated goat anti-rabbit polyclonal used at a 1/00 dilution.

Red = Actin
Blue = DAPI
Green / Yellow = Cathepsin K

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