**Product datasheet**

**Anti-Cathepsin K antibody ab19027**

<table>
<thead>
<tr>
<th>Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product name</strong></td>
</tr>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td><strong>Host species</strong></td>
</tr>
<tr>
<td><strong>Specificity</strong></td>
</tr>
<tr>
<td><strong>Tested applications</strong></td>
</tr>
<tr>
<td><strong>Species reactivity</strong></td>
</tr>
<tr>
<td><strong>Immunogen</strong></td>
</tr>
</tbody>
</table>

**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>
</tr>
</thead>
<tbody>
<tr>
<td>IHC-Fr</td>
<td>✪✪✪✪✪</td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td>✪✪✪✪</td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>
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.

Target

Application | Abreviews | Notes
--- | --- | ---
WB | ![Rating](https://www.abcam.com/splitter/abcam-rating.svg) | 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 Cathepsin K peptide (ab41720).
IHC-P | ![Rating](https://www.abcam.com/splitter/abcam-rating.svg) | Use at an assay dependent concentration.

Notes
This image is a courtesy of Anonymous Abreview
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 (1ug/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.

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.

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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