Product datasheet

Anti-Osteocalcin antibody ab93876

Overview

Product name
Antiosteocalcin antibody

Description
Rabbit polyclonal to Osteocalcin

Host species
Rabbit

Tested applications
Suitable for: WB, IHC-P

Species reactivity
Reacts with: Mouse, Human

Immunogen
Synthetic peptide. This information is considered to be commercially sensitive.

Positive control
IHC-P: Mouse bone and human hepatocarcinoma tissue. WB: HeLa cell lysate.

Properties

Form
Liquid

Storage instructions
Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.

Storage buffer
pH: 7.40
Preservative: 0.02% Sodium azide
Constituents: PBS, 1% BSA

Purity
Protein A purified

Purification notes
Affinity purified

Clonality
Polyclonal

Isotype
IgG

Applications

Our Abpromise guarantee covers the use of ab93876 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>WB</td>
<td>1/500</td>
<td>Predicted molecular weight: 11 kDa. PubMed: 24753072</td>
</tr>
<tr>
<td>IHC-P</td>
<td>★★★★★</td>
<td>Use a concentration of 5 µg/ml.</td>
</tr>
</tbody>
</table>
### Target

<table>
<thead>
<tr>
<th>Function</th>
<th>Constitutes 1-2% of the total bone protein. It binds strongly to apatite and calcium.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence similarities</td>
<td>Belongs to the osteocalcin/matrix Gla protein family. Contains 1 Gla (gamma-carboxy-glutamate) domain.</td>
</tr>
<tr>
<td>Post-translational modifications</td>
<td>Gamma-carboxyglutamate residues are formed by vitamin K dependent carboxylation. These residues are essential for the binding of calcium.</td>
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<tr>
<td>Cellular localization</td>
<td>Secreted.</td>
</tr>
</tbody>
</table>

### Images

**Immunofluorescence for Osteocalcin in the mandibular arch.**

Mouse embryos for SEM were fixed in 2.5% glutaraldehyde and dehydrated in a series of graded serial ethanol solutions. Heat-induced antigen retrieval was applied for immunofluorescence. Deparaffinized sections were heated in 1x antigen unmasking solution at 100°C for 45 minutes. Osteocalcin (Abcam, ab93876), Alexa Fluor 488 and Alexa Fluor 555 secondary antibodies were used for signal detection. Primary antibody was incubated overnight at 4 °C, secondary antibody was incubated at room temperature for 2 hours. Fluorescence signaling quantification was performed by calculating average fluorescence intensity of the signal channels using the Image J software in accordance with the recommended guidelines.

mc: the Meckel’s cartilage; pl: palate; md: mandibular arch; ton: tongue.

Mouse femur tissues were fixed using 4% paraformaldehyde in PBS at 4°C for 24 hours and then decalcified in 15% EDTA (pH 7.4) at 4°C for 14 days. The tissues were embedded in paraffin or optimal cutting temperature (OCT) compound, and 2–5 μm sagittal-oriented sections were prepared for histological analyses. Incubated with primary antibody to osteocalcin (Abcam, 1:500, ab93876) overnight at 4°C.
IHC image of ab93876 staining in mouse bone, formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol B.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab93876, 5 µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with hematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

Formalin-fixed, paraffin-embedded human hepatocarcinoma tissue stained for Osteocalcin with ab93876 at a 1/100 dilution in immunohistochemical analysis.
Western blot - Anti-Osteocalcin antibody (ab93876)

Anti-Osteocalcin antibody (ab93876) at 1/500 dilution + HeLa (human epithelial cell line from cervix adenocarcinoma) cell lysate

**Predicted band size:** 11 kDa

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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