Anti-Collagen V antibody ab7046

Overview

Product name: Anti-Collagen V antibody
Description: Rabbit polyclonal to Collagen V
Host species: Rabbit
Specificity: Negligible cross-reactivity with Type I, II, III, IV or VI collagens. Non-specific cross reaction of anti-collagen antibodies with other human serum proteins or non-collagen extracellular matrix proteins is negligible.

Tested applications: Suitable for: ICC, Sandwich ELISA, IHC-Fr, IP, WB, IHC-P

Species reactivity: Reacts with: Mouse, Cow, Human

Immunogen: Full length native protein (purified) corresponding to Collagen V aa 1-1745.

Positive control: Natural Collagen V protein (ab7530) can be used as a positive control in WB. IHC: Dog skeletal muscle tissue, Human pancreas tissue.

General notes: Some class specific anti-collagens may be specific for three-dimensional epitopes which may result in diminished reactivity with denatured collagen or formalin-fixed, paraffin embedded tissues.

Properties

Form: Liquid


Storage buffer: pH: 8.00
Preservative: 0.01% Sodium azide
Constituents: 4.8% Sodium borate, 0.15% EDTA, 0.44% Sodium chloride

Purity: Immunogen affinity purified

Purification notes: Immunoaffinity chromatography using immobilized antigens followed by extensive cross-adsorption against other collagens, human serum proteins and non-collagen extracellular matrix proteins to remove any unwanted specificities.

Clonality: Polyclonal

Isotype: IgG
### Function
Type V collagen is a member of group I collagen (fibrillar forming collagen). It is a minor connective tissue component of nearly ubiquitous distribution. Type V collagen binds to DNA, heparan sulfate, thrombospondin, heparin, and insulin.

### Involvement in disease
- Ehlers-Danlos syndrome 1
- Ehlers-Danlos syndrome 2

### Sequence similarities
Belongs to the fibrillar collagen family.
- Contains 1 fibrillar collagen NC1 domain.
- Contains 1 laminin G-like domain.

### Domain
The C-terminal propeptide, also known as COLFI domain, have crucial roles in tissue growth and repair by controlling both the intracellular assembly of procollagen molecules and the extracellular assembly of collagen fibrils. It binds a calcium ion which is essential for its function.

### Post-translational modifications
Prolines at the third position of the tripeptide repeating unit (G-X-Y) are hydroxylated in some or all of the chains.
- Sulfated on 40% of tyrosines.

### Cellular localization
Secreted > extracellular space > extracellular matrix.

### Applications

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<tr>
<th>Application</th>
<th>Abreviews</th>
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<tr>
<td>ICC</td>
<td></td>
<td>Use at an assay dependent concentration. PubMed: 18385800</td>
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<tr>
<td>Sandwich ELISA</td>
<td></td>
<td>Use a concentration of 10 µg/ml. Can be used with a suitable biotinylated detection antibody such as Rabbit polyclonal to Collagen V (Biotin) (ab6582).</td>
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<tr>
<td>IHC-Fr</td>
<td>★★★★★</td>
<td>1/50 - 1/200.</td>
</tr>
<tr>
<td>IP</td>
<td></td>
<td>1/5000 - 1/10000.</td>
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<tr>
<td>WB</td>
<td></td>
<td>1/5000 - 1/10000. Detects a band of approximately 180 kDa (predicted molecular weight: 180 kDa). Native conditions are recommended.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>★★★★★</td>
<td>1/50 - 1/200.</td>
</tr>
</tbody>
</table>

### Target

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Anti-Collagen V antibody (ab7046) at 1 µg/ml + Human pancreas tissue lysate - total protein (ab29816) at 10 µg

**Secondary**
Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 180 kDa
**Observed band size:** 180 kDa
**Additional bands at:** 122 kDa, 54 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 8 minutes

ab7046 staining Collagen V in Human pancreas tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded tissue sections). The sections were fixed in formaldehyde and subjected to heat-mediated antigen retrieval in citrate pH 6 prior to blocking with 0.25% casein for 5 minutes at 25°C. The primary antibody was diluted 1/75 in Tris–HCL and incubated with the sample for 30 minutes at 25°C. An HRP polymer-conjugated goat anti-rabbit antibody was used as the secondary antibody.
Immunohistochemistry (Frozen sections) - Anti-Collagen V antibody (ab7046)

This image is courtesy of an anonymous Abreview.

ab7046 staining Collagen V in Dog skeletal muscle tissue by Immunohistochemistry (Frozen sections). The sections were fixed in Acetone. The primary antibody was diluted 1/100 in 10% Normal Goat Serum (ab7481) in PBS-T and incubated with the sample for 12 hours at 4°C. A Rhodamine-conjugated Goat anti-Rabbit IgG was used as the secondary antibody, diluted 1/200.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Collagen V antibody (ab7046)

Immunohistochemical analysis of formalin-fixed paraffin-embedded human lung (left) and placenta (right) sections labelling collagen V with ab7046 at a dilution of 1/200 for 45 minutes at room temperature. An antigen retrieval step was performed with 0.01 M sodium citrate buffer pH 6.0 at 100°C for 20 mins.

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