Product datasheet

Anti-Collagen VI antibody ab6588

20 Abreviews  51 References  7 Images

Overview

Product name           Anti-Collagen VI antibody
Description           Rabbit polyclonal to Collagen VI
Host species          Rabbit
Specificity
Negligible cross-reactivity with Type I, II, III, IV or V 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/IF, ELISA, IHC-Fr, IP, WB, IHC-P

Species reactivity
Reacts with: Mouse, Rat, Sheep, Rabbit, Cow, Dog, Human, Pig
Predicted to work with: Mammals

Immunogen
Full length native protein (purified) corresponding to Human Collagen VI aa 1-1028. Collagen Type VI from human and bovine placenta.
Database link: P12109

Positive control

General notes
At least 11 genetically distinct gene products are collectively referred to as ‘collagen types’ or other proteins and proteoglycans of the extracellular matrix. In humans, collagens are composed of about 20 unique protein chains which undergo various types of post-translational modifications and are ultimately assembled into a triple helix. This results in great diversity between collagen types. Collagens are highly conserved throughout evolution and are characterized by an uninterrupted "Glycine-X-Y" triplet repeat that is a necessary part of the triple helical structure. For these reasons it is often extremely difficult to generate antibodies with specificities to collagens. The development of type specific antibodies is dependent on NON-DENATURED three-dimensional epitopes. This preparation results in a native conformation of the protein.

Properties

Form
Liquid

Storage instructions

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

Applications

Our Abpromise guarantee covers the use of ab6588 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>ICC/IF</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/250 - 1/500.</td>
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<tr>
<td>ELISA</td>
<td></td>
<td>1/4000 - 1/8000.</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>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>WB</td>
<td>⭐⭐⭐⭐</td>
<td>1/5000 - 1/10000. Detects a band of approximately 100 kDa (predicted molecular weight: 108 kDa). This product is not recommended for use under denaturing conditions in WB, IP, and ELISA. We would suggest testing it under native conditions.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration. PubMed: 18065394</td>
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Target

Function
Collagen VI acts as a cell-binding protein.

Involvement in disease
Defects in COL6A1 are a cause of Bethlem myopathy (BM) [MIM:158810]. BM is a rare autosomal dominant proximal myopathy characterized by early childhood onset (complete penetrance by the age of 5) and joint contractures most frequently affecting the elbows and ankles.
Defects in COL6A1 are a cause of Ullrich congenital muscular dystrophy (UCMD) [MIM:254090]; also known as Ullrich scleroatonic muscular dystrophy. UCMD is an autosomal recessive congenital myopathy characterized by muscle weakness and multiple joint contractures, generally noted at birth or early infancy. The clinical course is more severe than in Bethlem myopathy.

Sequence similarities
Belongs to the type VI collagen family.
Contains 3 VWFA domains.

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.

Cellular localization
Secreted > extracellular space > extracellular matrix.
Western blot - Anti-Collagen VI antibody (ab6588)

Anti-Collagen VI antibody (ab6588) at 1/5000 dilution + HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate at 10 µg

**Secondary**
Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

**Predicted band size:** 108 kDa
**Observed band size:** 100 kDa

Immunohistochemical analysis of 10% buffered formalin-fixed swine lung tissue sections, labelling Collagen VI with ab6588 at a dilution of 1/400 incubated for 12 hours at 4°C. Antigen retrieval was with 10mM sodium citrate buffer pH 6.0 (heat mediated). Blocking was with 5% serum incubated for 1 hour at 21°C. The secondary was a Donkey anti-Rabbit polyclonal Alexa Fluor® 647 conjugate undiluted.

Image is courtesy of an anonymous AbReview.
ab6588 staining (green) Collagen VI in a primary cell culture from Mouse retinal pigment epithelium by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with 0.5% TX-100 and blocked with 5% serum for 20 minutes at 25°C. Samples were incubated with primary antibody 1/500 (1% goat serum, 0.1% TX100, 1XPBS) for 16 hours at 4°C. An Alexa Fluor® 488-conjugated Goat polyclonal to rabbit IgG (ab150077), dilution 1/500, was used as secondary antibody. Nuclei were counterstained with DAPI (blue).

ab6588 staining Collagen VI in human liver tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Tissue was fixed in paraformaldehyde and an antigen retrieval step was performed using citrate buffer. Samples were then blocked with 10% serum for 30 minutes at 20°C and then incubated with ab6588 at a 1/50 dilution for 1 hour at 37°C. The secondary used was an Alexa-Fluor 555 conjugated goat anti-rabbit polyclonal (ab150078), used at a 1/500 dilution.
ab6588 staining Collagen VI in a primary cell culture from Pig retinal pigment epithelium by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with 0.5% TX-100 and blocked with 5% serum for 20 minutes at 25°C. Samples were incubated with primary antibody 1/250 (1% goat serum, 0.1% TX100, 1XPBS) for 16 hours at 4°C. An Alexa Fluor® 488-conjugated Goat polyclonal to rabbit IgG, dilution 1/500, was used as secondary antibody. Nuclei were counterstained with DAPI (blue).

ab6588 at 1/400 dilution staining Collagen VI in Human placenta (Top) with red staining of stromal and extracellular spaces, and in testis (Right) with staining of extracellular spaces between seminiferous tubules. Slides were steamed in 0.01 M sodium citrate buffer, pH 6.0 at 99-100°C - 20 minutes for antigen retrieval.
Immunohistochemical analysis of Formaldehyde fixed human colon tissue sections labelling Collagen VI with ab6588 at a dilution of 1/200. The secondary antibody used was HRP conjugated rabbit polyclonal secondary. Antigen retrieval was heat mediated.

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