Product datasheet

Anti-Integrin alpha 2 antibody [EPR5788] ab133557

Overview

Product name: Anti-Integrin alpha 2 antibody [EPR5788]
Description: Rabbit monoclonal [EPR5788] to Integrin alpha 2
Host species: Rabbit
Tested applications: Suitable for: Flow Cyt, WB, IHC-P
Unsuitable for: ICC/IF
Species reactivity: Reacts with: Mouse, Human
Immunogen: Synthetic peptide within Human Integrin alpha 2 aa 1-100 (extracellular). The exact sequence is proprietary.
General notes: A trial size is available to purchase for this antibody.
Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents
We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.

This product is a recombinant rabbit monoclonal antibody.

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C.
Dissociation constant (K_D): K_D = 3.20 x 10^{-12} M
Storage buffer
pH: 7.40
Preservative: 0.01% Sodium azide
 Constituents: 40% Glycerol, 0.05% BSA, 59% PBS

Purity
Protein A purified

Clonality
Monoclonal

Clone number
EPR5788

Isotype
IgG

Applications
Our Abpromise guarantee covers the use of ab133557 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tr>
<td>Flow Cyt</td>
<td>1/10 - 1/1000.</td>
<td>ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.</td>
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<tr>
<td>WB</td>
<td>1/10000 - 1/50000.</td>
<td>Detects a band of approximately 150 kDa (predicted molecular weight: 129 kDa).</td>
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<tr>
<td>IHC-P</td>
<td>1/250.</td>
<td>Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See IHC antigen retrieval protocols.</td>
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Application notes
Is unsuitable for ICC/IF.

Target

Function
Integrin alpha-2/beta-1 is a receptor for laminin, collagen, collagen C-propeptides, fibronectin and E-cadherin. It recognizes the proline-hydroxylated sequence G-F-P-G-E-R in collagen. It is responsible for adhesion of platelets and other cells to collagens, modulation of collagen and collagenase gene expression, force generation and organization of newly synthesized extracellular matrix.

Sequence similarities
Belongs to the integrin alpha chain family.
Contains 7 FG-GAP repeats.
Contains 1 VWFA domain.

Domain
The integrin I-domain (insert) is a VWFA domain. Integrins with I-domains do not undergo protease cleavage.

Cellular localization
Membrane.

Images
Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: Integrin alpha 2 knockout HAP1 cell lysate (20 µg)
Lane 3: A431 cell lysate (20 µg)
Lane 4: T47D cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab133557 observed at 165 kDa. Red - loading control, ab8245, observed at 37 kDa.

ab133557 was shown to specifically react with Integrin alpha 2 when Integrin alpha 2 knockout samples were used. Wild-type and Integrin alpha 2 knockout samples were subjected to SDS-PAGE. ab133557 and ab8245 (loading control to GAPDH) were diluted 1/10 000 and 1/2000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1/10,000 dilution for 1 h at room temperature before imaging.

All lanes: Anti-Integrin alpha 2 antibody [EPR5788] (ab133557) at 1/10000 dilution (purified)
Lane 1: T47-D cell lysate
Lane 2: HEK293 cell lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes: Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 129 kDa
Observed band size: 150 kDa

why is the actual band size different from the predicted?

Blocking buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Anti-Integrin alpha 2 antibody [EPR5788] (ab133557) at 1/50000 dilution (purified) + A431 cell lysate at 20 µg

Secondary
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 129 kDa
Observed band size: 150 kDa why is the actual band size different from the predicted?

Blocking buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM /TBST.

Anti-Integrin alpha 2 antibody [EPR5788] (ab133557) at 1/10000 dilution (purified) + Mouse spleen tissue lysate at 20 µg

Secondary
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 129 kDa
Observed band size: 150 kDa why is the actual band size different from the predicted?

Blocking buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM /TBST.
Western blot - Anti-Integrin alpha 2 antibody [EPR5788] (ab133557)

**All lanes**: Anti-Integrin alpha 2 antibody [EPR5788] (ab133557) at 1/10000 dilution (unpurified)

- **Lane 1**: T47D lysate
- **Lane 2**: 293T lysate
- **Lane 3**: Human platelet lysate
- **Lane 4**: A431 lysate

Lysates/proteins at 10 µg per lane.

**Secondary**

**All lanes**: HRP labelled goat anti-rabbit at 1/2000 dilution

**Predicted band size**: 129 kDa

**Observed band size**: 150 kDa

*why is the actual band size different from the predicted?*

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human breast carcinoma tissue labelling Integrin alpha 2 with purified ab133557 at 1/500. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. *ab97051*, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon tissue labelling Integrin alpha 2 with unpurified ab133557 at 1/250.

Flow Cytometry analysis of A549 cells labelling Integrin alpha 2 with purified ab133557 at 1/60 (red). Cells were fixed with 2% paraformaldehyde. A FITC-conjugated goat anti-rabbit IgG (1/150) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.

Overlay histogram showing A431 cells stained with unpurified ab133557 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab133557, 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was a goat anti-rabbit Alexa Fluor® 488 (IgG; H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1μg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.
Equilibrium disassociation constant (K_D)

Learn more about K_D

Click here to learn more about K_D

Other - Anti-Integrin alpha 2 antibody [EPR5788] (ab133557)

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