Anti-Factor XIIIa antibody [AC-1A1] ab1834

Overview

Product name: Anti-Factor XIIIa antibody [AC-1A1]
Description: Mouse monoclonal [AC-1A1] to Factor XIIIa
Host species: Mouse
Tested applications: Suitable for: ICC/IF, ELISA, IHC-P, IHC-Fr, WB, Flow Cyt
Species reactivity: Reacts with: Mouse, Human
Immunogen: BALB/C mice were injected with recombinant human protein corresponding to A-subunit of coagulation Factor XIII.
Positive control: Placenta
General notes: This antibody recognizes both the dimer and monomer forms.

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 or -80°C. Avoid freeze / thaw cycle.
Storage buffer: Preservative: 0.05% Sodium azide
Constituent: 1% BSA
Purity: IgG fraction
Clonality: Monoclonal
Clone number: AC-1A1
Isotype: IgG1
Light chain type: kappa

Applications

Our Abpromise guarantee covers the use of ab1834 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Function

Factor XIII is activated by thrombin and calcium ion to a transglutaminase that catalyzes the formation of gamma-glutamyl-epsilon-lysine cross-links between fibrin chains, thus stabilizing the fibrin clot. Also cross-link alpha-2-plasmin inhibitor, or fibronectin, to the alpha chains of fibrin.

Involvement in disease

Defects in F13A1 are the cause of factor XIII subunit A deficiency (FA13AD) [MIM:613225]. FA13AD is an autosomal recessive disorder characterized by a life-long bleeding tendency, impaired wound healing and spontaneous abortion in affected women.

Sequence similarities

Belongs to the transglutaminase superfamily. Transglutaminase family.

Post-translational modifications

The activation peptide is released by thrombin.

Cellular localization

Cytoplasm. Secreted. Secreted into the blood plasma. Cytoplasmic in most tissues, but also secreted in the blood plasma.

Images

ab1834 - immunohistochemistry

Formalin fixed paraffin embedded human placenta stained with Factor XIIIa, using ABC and AEC chromogen.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>ELISA</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>IHC-P</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>IHC-Fr</td>
<td></td>
<td>Use at an assay dependent concentration. This antibody may be diluted to a titer of 1/25 - 1/50 in an ABC method.</td>
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<tr>
<td>WB</td>
<td></td>
<td>Use at an assay dependent concentration. Detects a band of approximately 83 kDa (predicted molecular weight: 83 kDa).</td>
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<tr>
<td>Flow Cyt</td>
<td>ab170190</td>
<td>Use 1µg for 10^6 cells.</td>
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</tbody>
</table>

Notes

This antibody may be diluted to a titer of 1/25 - 1/50 in an ABC method. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
ab1834 staining human placenta by IHC-P.

**Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Factor XIIIa antibody [AC-1A1] (ab1834)**

**Western blot - Anti-Factor XIIIa antibody [AC-1A1] (ab1834)**

Anti-Factor XIIIa antibody [AC-1A1] (ab1834) at 1/250 dilution + Human placenta tissue lysate - total protein (ab29745) at 10 µg

**Secondary**
Goat Anti-Mouse IgG H&L (HRP) preadsorbed (ab97040) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 83 kDa

**Observed band size:** 83 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 2 minutes

Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human placenta tissue, staining Factor XIIIa with ab1834.
Overlay histogram showing A549 cells stained with ab16956 (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 (ab16956, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.

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