## Overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>Anti-CD9 antibody [EPR2949]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Rabbit monoclonal [EPR2949] to CD9</td>
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<tr>
<td>Host species</td>
<td>Rabbit</td>
</tr>
<tr>
<td>Tested applications</td>
<td>Suitable for: WB, IP, IHC-P</td>
</tr>
<tr>
<td></td>
<td>Unsuitable for: Flow Cyt or ICC/IF</td>
</tr>
<tr>
<td>Species reactivity</td>
<td>Reacts with: Mouse, Rat, Human</td>
</tr>
<tr>
<td>Immunogen</td>
<td>Synthetic peptide within Human CD9 aa 200 to the C-terminus. The exact sequence is proprietary. Database link: P21926</td>
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<tr>
<td>Positive control</td>
<td>WB: HeLa, HuT-78, MCF7 and U87-MG cell lysates. Mouse heart and kidney lysate; Rat brain lysate. IHC-P: Human papillary carcinoma, astrocytoma, brain, kidney and tonsil tissue; Rat spleen tissue. IP: HeLa whole cell lysate (ab150035).</td>
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<tr>
<td>General notes</td>
<td>This product is a recombinant monoclonal antibody, which offers several advantages including:</td>
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<td>- High batch-to-batch consistency and reproducibility</td>
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<tr>
<td></td>
<td>- Improved sensitivity and specificity</td>
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<tr>
<td></td>
<td>- Long-term security of supply</td>
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<td>- Animal-free production</td>
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For more information see here.

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.

Reproducibility is key to advancing scientific discovery and accelerating scientists’ next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and
species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

Properties

<table>
<thead>
<tr>
<th>Form</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage instructions</td>
<td>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.</td>
</tr>
<tr>
<td>Storage buffer</td>
<td>pH: 7.20</td>
</tr>
<tr>
<td></td>
<td>Preservative: 0.01% Sodium azide</td>
</tr>
<tr>
<td></td>
<td>Constituents: PBS, 40% Glycerol, 0.05% BSA</td>
</tr>
<tr>
<td>Purity</td>
<td>Protein A purified</td>
</tr>
<tr>
<td>Clonality</td>
<td>Monoclonal</td>
</tr>
<tr>
<td>Clone number</td>
<td>EPR2949</td>
</tr>
<tr>
<td>Isotype</td>
<td>IgG</td>
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</table>

Applications

Our Abpromise guarantee covers the use of ab92726 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>
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<tbody>
<tr>
<td>IP</td>
<td></td>
<td>1/10 - 1/100.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/500. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See IHC antigen retrieval protocols.</td>
</tr>
</tbody>
</table>

Application notes

Is unsuitable for Flow Cyt or ICC/IF.

Target
| **Function** | Involved in platelet activation and aggregation. Regulates paranodal junction formation. Involved in cell adhesion, cell motility and tumor metastasis. Required for sperm-egg fusion. |
| **Tissue specificity** | Expressed by a variety of hematopoietic and epithelial cells. |
| **Sequence similarities** | Belongs to the tetraspanin (TM4SF) family. |
| **Post-translational modifications** | Protein exists in three forms with molecular masses between 22 and 27 kDa, and is known to carry covalently linked fatty acids. |
| **Cellular localization** | Membrane. |

### Images

**Western blot - Anti-CD9 antibody [EPR2949] (ab92726)**

- **All lanes**: Anti-CD9 antibody [EPR2949] (ab92726) at 1/1000 dilution
- **Lane 1**: Wild-type A549 whole cell lysate
- **Lane 2**: CD9 knockout A549 whole cell lysate
- **Lane 3**: MCF7 whole cell lysate

Lysates/proteins at 20 µg per lane.

**Predicted band size**: 25 kDa

**Lanes 1 - 3**: Merged signal (red and green). Green - ab92726 observed at 22 kDa. Red - loading control, ab9484, observed at 37 kDa.

ab92726 was shown to recognize CD9 in wild-type A549 cells as signal was lost at the expected MW in CD9 knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and CD9 knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. Ab92726 and ab9484 (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.
Immunohistochemical staining of paraffin embedded rat spleen with purified ab92726 at a working dilution of 1/500. The secondary antibody used is HRP goat anti-rabbit IgG H&L (ab97051) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.

ab92726 (purified) at 1/20 immunoprecipitating CD9 in 10 μg HeLa (Lanes 1 and 2, observed at 24 kDa). Lane 3 - PBS. For western blotting, a HRP-conjugated anti-rabbit IgG, specific to the non-reduced form of IgG was used as the secondary antibody (1/1500).

Blocking buffer and concentration: 5% NFDM/TBST

Dilution buffer and concentration: 5% NFDM/TBST
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD9 antibody [EPR2949] (ab92726)

Formalin-fixed, paraffin-embedded Papillary carcinoma of thyroid gland tissue stained for CD9 using ab92726 at 1/500 dilution in immunohistochemical analysis.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Western blot - Anti-CD9 antibody [EPR2949] (ab92726)

All lanes: Anti-CD9 antibody [EPR2949] (ab92726) at 1/1000 dilution

Lane 1: MCF7 (Human breast adenocarcinoma epithelial cell). Whole cell lysates with 5% NFDM/TBST
Lane 2: Daudi (Human Burkitt's lymphoma lymphoblast). Whole cell lysates. (negative/low expression control) with 5% NFDM/TBST

Lysates/proteins at 20 µg per lane.

Secondary

All lanes: Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated)

Predicted band size: 25 kDa
Observed band size: 22 kDa
why is the actual band size different from the predicted?

Exposure time: 3 seconds
Formalin-fixed, paraffin-embedded Normal kidney tissue stained for CD9 using ab92726 at 1/500 dilution in immunohistochemical analysis.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Formalin-fixed, paraffin-embedded Astrocytoma tissue stained for CD9 using ab92726 at 1/500 dilution in immunohistochemical analysis.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

All lanes: Anti-CD9 antibody [EPR2949] (ab92726) at 1/10000 dilution (purified)

Lane 1: HeLa cell lysate
Lane 2: HuT-78 cell lysate
Lane 3: U87-MG cell lysate

Lysates/proteins at 20 µg per lane.

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

Predicted band size: 25 kDa
Observed band size: 24 kDa why is the actual band size different from the predicted?
Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST

**Western blot - Anti-CD9 antibody [EPR2949] (ab92726)**

**All lanes**: Anti-CD9 antibody [EPR2949] (ab92726) at 1/2000 dilution (purified)

**Lane 1**: mouse heart lysate
**Lane 2**: mouse kidney lysate
**Lane 3**: rat brain lysate

Lysates/proteins at 20 µg per lane.

**Secondary**

**All lanes**: HRP goat anti-rabbit IgG (H+L) at 1/1000 dilution

**Predicted band size**: 25 kDa
**Observed band size**: 24 kDa

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

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST

Formalin-fixed, paraffin-embedded Normal brain tissue stained for CD9 using ab92726 at 1/500 dilution in immunohistochemical analysis.

Perform heat mediated **antigen retrieval** before commencing with IHC staining protocol.
Immunohistochemical staining of paraffin embedded human tonsil with purified ab92726 at a working dilution of 1/500. The secondary antibody used is HRP goat anti-rabbit IgG H&L (ab97051) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.

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

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- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

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