Product name: Anti-CD44 antibody [EPR1013Y]

Description: Rabbit Monoclonal [EPR1013Y] to CD44

Host species: Rabbit

Tested applications:
- Suitable for: IHC-P, IHC-Fr, WB, Flow Cyt
- Unsuitable for: IP

Species reactivity:
- Reacts with: Human
- Does not react with: Mouse, Rat

Immunogen:
Synthetic peptide within Human CD44 aa 150-250. The exact sequence is proprietary.

Positive control:
TF-1 cell lysate or human urinary bladder tissue.

General notes:
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.

Form: Liquid

Storage instructions:
- Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.

Dissociation constant ($K_D$): $K_D = 3.76 \times 10^{-10}$ M

Storage buffer:
PBS 49%, Sodium azide 0.01%, Glycerol 50%, BSA 0.05%
Purity: Protein A purified  
Clonality: Monoclonal  
Clone number: EPR1013Y  
Isotype: IgG  

Applications

Our Abpromise guarantee covers the use of ab51037 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>
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</thead>
<tbody>
<tr>
<td>IHC-P</td>
<td>★★★★★</td>
<td>1/50 - 1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.</td>
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<tr>
<td>IHC-Fr</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>WB</td>
<td>★★★★☆☆</td>
<td>1/5000. Detects a band of approximately 82 kDa (predicted molecular weight: 82 kDa).</td>
</tr>
<tr>
<td>Flow Cyt</td>
<td>★★★★☆☆</td>
<td>1/30. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.</td>
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</tbody>
</table>

Application notes: Is unsuitable for IP.

Target

Function: Receptor for hyaluronic acid (HA). Mediates cell-cell and cell-matrix interactions through its affinity for HA, and possibly also through its affinity for other ligands such as osteopontin, collagens, and matrix metalloproteinases (MMPs). Adhesion with HA plays an important role in cell migration, tumor growth and progression. Also involved in lymphocyte activation, recirculation and homing, and in hematopoiesis. Altered expression or dysfunction causes numerous pathogenic phenotypes. Great protein heterogeneity due to numerous alternative splicing and post-translational modification events.

Tissue specificity: Isoform 10 (epithelial isoform) is expressed by cells of epithelium and highly expressed by carcinomas. Expression is repressed in neuroblastoma cells.

Sequence similarities: Contains 1 Link domain.

Domain: The lectin-like LINK domain is responsible for hyaluronan binding.

Post-translational modifications: Proteolytically cleaved in the extracellular matrix by specific proteinases (possibly MMPs) in several cell lines and tumors. N-glycosylated. O-glycosylated; contains more-or-less-sulfated chondroitin sulfate glycans, whose number may affect the accessibility of specific proteinases to their cleavage site(s). Phosphorylated; activation of PKC results in the dephosphorylation of Ser-706 (constitutive phosphorylation site), and the phosphorylation of Ser-672.

Cellular localization: Membrane.
ab51037 (1:100) showing positive staining in human Breast carcinoma tissue.

ab51037 used at a 1/200 dilution (red) to detect CD44 in human MDA-MB-231 cells by Flow Cytometry. The secondary used was a Pgoat anti-rabbit IgG (Alexa Fluor® 488) polyclonal used at a 1/2000 dilution. Isotype control (black): Rabbit monoclonal IgG (ab172730). Unlabelled control (Blue): Cell without incubation with primary antibody and secondary antibody.
Immunohistochemical analysis of paraffin-embedded human pancreatic cancer tissue labeling CD44 with ab51037 at 1/100 dilution followed by goat anti-rabbit IgG H&L (HRP) (ab97051, 1/500). The sample was counterstained with hematoxylin.

**Western blot**

All lanes: Anti-CD44 antibody [EPR1013Y] (ab51037) at 1/1000 dilution

Lane 1: MCF-7 whole cell lysate
Lane 2: Jurkat whole cell lysate
Lane 3: MDA-MB-231 whole cell lysate
Lane 4: HeLa whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

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

Predicted band size: 82 kDa
Observed band size: 81 kDa

Exposure time: 3 minutes

Blocking and diluting buffer 5% NFDM/TBST

The expression of CD44 in MCF-7 is low (PMID: 25635866; PMID: 26005723). Jurkat does not express CD44 (PMID: 24127558).
Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling CD44 with ab51037 at 1/100 dilution followed by goat anti-rabbit IgG H&L (HRP) (ab97051, 1/500). The sample was counter stained with hematoxylin.

Immunohistochemical analysis of paraffin-embedded human skin tissue labeling CD44 with ab51037 at 1/100 dilution followed by goat anti-rabbit IgG H&L (HRP) (ab97051, 1/500). The sample was counter stained with hematoxylin.
Immunohistochemical analysis of paraffin-embedded human cervical cancer tissue labeling CD44 with ab51037 at 1/100 dilution followed by goat anti-rabbit IgG H&L (HRP) (ab97051, 1/500). The sample was counter stained with hematoxylin.

Anti-CD44 antibody [EPR1013Y] (ab51037) at 1/5000 dilution + TF-1 cell lysate at 10 µg

Secondary
Goat anti-Rabbit HRP labeled. at 1/2000 dilution

Predicted band size: 82 kDa
Observed band size: 82 kDa

ab51037 (1:100) showing positive staining in human Glioma tissue.
ab51037 (1:100) showing positive staining in human Thyroid gland carcinoma tissue.

Equilibrium disassociation constant (K_{D})

Learn more about K_{D}

Click here to learn more about K_{D}

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