Product datasheet

Anti-CD20 antibody [EP459Y] ab78237

Product name
Anti-CD20 antibody [EP459Y]

Description
Rabbit monoclonal [EP459Y] to CD20

Host species
Rabbit

Specificity
For optimal performance in IHC, the primary antibody should be incubated overnight at 4°. For more information see here.

Tested applications
Suitable for: Flow Cyt, ICC/IF, WB, IP, IHC-P

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

Immunogen
Synthetic peptide within Human CD20 aa 250 to the C-terminus (C terminal) conjugated to keyhole limpet haemocyanin. The exact sequence is proprietary.
Database link: P11836

Positive control

General notes
This product is a recombinant monoclonal antibody, which offers several advantages including:
- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free production
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.

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. Avoid freeze / thaw cycle.

**Storage buffer**
pH: 7.20
Preservative: 0.01% Sodium azide
Constituents: PBS, 40% Glycerol, 0.05% BSA

**Purity**
Protein A purified

**Clonality**
Monoclonal

**Clone number**
EP459Y

**Isotype**
IgG

### Applications

Our [Abpromise guarantee](#) covers the use of [ab78237](#) 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>Flow Cyt</td>
<td>1/200. ab172730</td>
<td>Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.</td>
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<tr>
<td>ICC/IF</td>
<td>1/10.</td>
<td></td>
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<tr>
<td>WB</td>
<td>1/1000 - 1/10000. Detects a band of approximately 33 kDa (predicted molecular weight: 33 kDa).</td>
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<tr>
<td>IP</td>
<td>1/20.</td>
<td></td>
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<tr>
<td>IHC-P</td>
<td>1/50 - 1/250. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. For optimal performance in IHC, the primary antibody should be incubated overnight at 4?.</td>
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### Target

**Function**
This protein may be involved in the regulation of B-cell activation and proliferation.

**Tissue specificity**
Expressed on B-cells.

**Involvement in disease**
Defects in MS4A1 are the cause of immunodeficiency common variable type 5 (CVID5) [MIM:613495]; also called antibody deficiency due to CD20 defect. CVID5 is a primary immunodeficiency characterized by antibody deficiency, hypogammaglobulinemia, recurrent bacterial infections and an inability to mount an antibody response to antigen. The defect results from a failure of B-cell differentiation and impaired secretion of immunoglobulins; the numbers of circulating B cells is usually in the normal range, but can be low.

**Sequence similarities**
Belongs to the MS4A family.

**Post-translational modifications**
Phosphorylated. Might be functionally regulated by protein kinase(s).

**Cellular localization**
Membrane.
Immunocytochemistry / Immunofluorescence analysis of Ramos (human Burkitt's lymphoma B lymphocyte) labeling CD20 with purified ab78237 at 1/10 dilution. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/1000 was used as the secondary antibody. Cells were counterstained with ab195889, Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1/200. PBS instead of the primary antibody was used as negative control. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Nuclei were stained with DAPI (blue).

Flow cytometry analysis of Ramos (Human Burkitt's lymphoma B lymphocyte) labeling CD20 with purified ab78237 at 1/200 dilution (Red). Goat anti rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as secondary antibody. Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol.

Isotype control: Rabbit monoclonal IgG (ab172730) (Black)
Unlabelled cells: (Blue)
Immunohistochemical staining of paraffin embedded human B cell lymphoma with purified ab78237 at a working dilution of 1/50.

The secondary antibody used is ab97051, a goat anti-rabbit IgG (H&L) at a dilution of 1/500. The sample is counterstained 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.

Formaldehyde-fixed, paraffin-embedded human spleen tissue stained for CD20 using ab78237 at 1/50 dilution in immunohistochemical analysis.

Heat mediated antigen retrieval with citrate pH 6.0.

ab78237 (purified) at 1/20 immunoprecipitating CD20 in 10 μg Ramos (Human Burkitt's lymphoma cell line) cell lysate (Lanes 1 and 2, observed at 33 kDa). Lane 3 - Rabbit monoclonal IgG (ab172730). For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10,000 dilution.

Blocking/Dilution buffer and concentration: 5% NFDM/TBST.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD20 antibody [EP459Y] (ab78237)

Unpurified ab78237 showing positive staining in human spleen tissue.

Unpurified ab78237 showing positive staining in human tonsil tissue.

Western blot - Anti-CD20 antibody [EP459Y] (ab78237)

Anti-CD20 antibody [EP459Y] (ab78237) at 1/10000 dilution (purified) + Raji (Human Burkitt’s lymphoma cell line) whole cell lysate

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

Predicted band size: 33 kDa
Observed band size: 33 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.
Anti-CD20 antibody [EP459Y] (ab78237) at 1/5000 dilution (unpurified) + Raji (Human Burkitt's lymphoma cell line) cell lysate

**Predicted band size**: 33 kDa

**Observed band size**: 33 kDa

Unpurified ab78237 staining human CD20 in human lymphoma tissue by immunohistochemistry using formalin fixed, paraffin embedded tissue.

Unpurified ab78237 showing **negative staining** in human brain tissue.
Unpurified ab78237 showing negative staining in human heart tissue.

Unpurified ab78237 showing negative staining in human kidney tissue.

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

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