

Product datasheet

Anti-Human IgM antibody [EPR20731] ab212201

Recombinant **RabMAb**

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Overview

Product name	Anti-Human IgM antibody [EPR20731]
Description	Rabbit monoclonal [EPR20731] to Human IgM
Host species	Rabbit
Tested applications	Suitable for: WB, IP, Flow Cyt, ICC/IF
Species reactivity	Reacts with: Human
Immunogen	Recombinant full length protein. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Raji whole cell lysate; human tonsil and fetal spleen tissue lysates. IP: Raji whole cell lysate. ICC/IF: Raji cells. Flow cytometry: Human PBMC cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

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 long term. Avoid freeze / thaw cycle.
Storage buffer	<p>pH: 7.2</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA</p>
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR20731
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab212201 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Predicted molecular weight: 49 kDa.
IP		1/30.
Flow Cyt		1/50.
ICC/IF		1/100.

Target

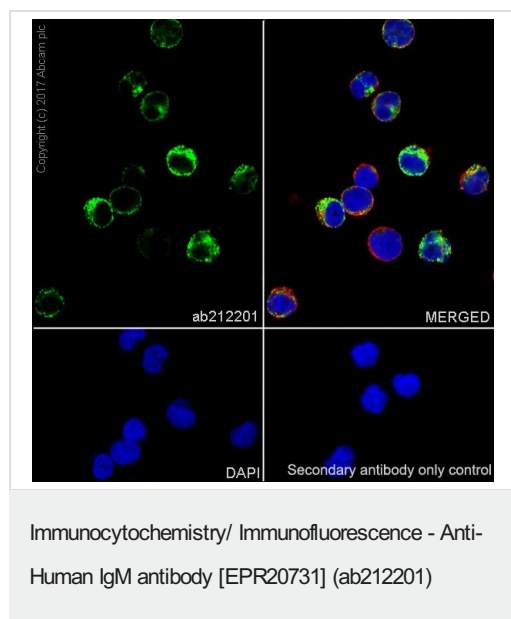
Relevance

IgM normally constitutes about 10% of serum immunoglobulins. IgM antibody is prominent in early immune responses to most antigens and is largely confined to plasma due to its large size. Monomeric IgM is expressed as a membrane bound antibody on the surface of B cells and as a pentamer when secreted by plasma cells. Due to its high valency IgM is more efficient than other isotypes in binding antigens with repeating epitopes (virus particles and red blood cells) and is more efficient than IgG in activating the complement pathway. The gene for the mu constant region contains four domains separated by short intervening sequences. IgM measurement yields information about the body's immediate resistance and response to infection as well as information related to specific diseases. Decreased levels are associated with immune deficiency states, hereditary deficiencies, and myeloma. Increased levels can be associated with Waldenstrom's macroglobulinemia, chronic infection and hepatocellular disease.

Cellular localization

Cell Membrane and Secreted

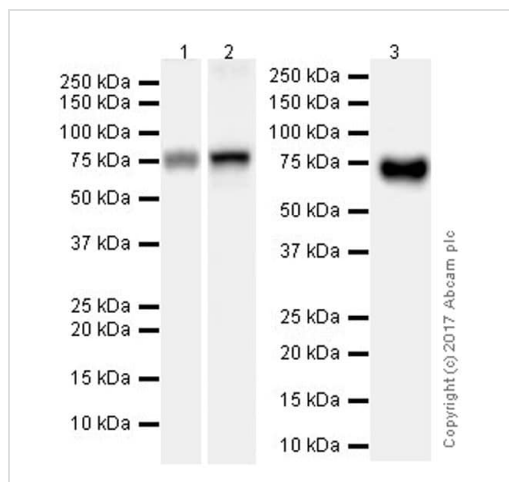
Images



Immunofluorescent analysis of 100% methanol-fixed Raji (human Burkitt's lymphoma cell line) cells labeling IgM with ab212201 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining in Raji cells.

The nuclear counterstain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor[®] 594) (**ab195889**) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor[®] 488) (**ab150077**) secondary antibody at 1/1000 dilution.



Western blot - Anti-Human IgM antibody
[EPR20731] (ab212201)

All lanes : Anti-Human IgM antibody [EPR20731] (ab212201) at 1/1000 dilution

Lane 1 : Raji (human Burkitt's lymphoma cell line) whole cell lysate at 20 µg

Lane 2 : Human tonsil tissue lysate at 20 µg

Lane 3 : Human fetal spleen tissue lysate at 10 µg

Secondary

All lanes : VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) at 1/4000 dilution

Developed using the ECL technique.

Predicted band size: 49 kDa

Observed band size: 78 kDa

The blot was developed on a BIO-RAD® ChemiDoc™ MP instrument.

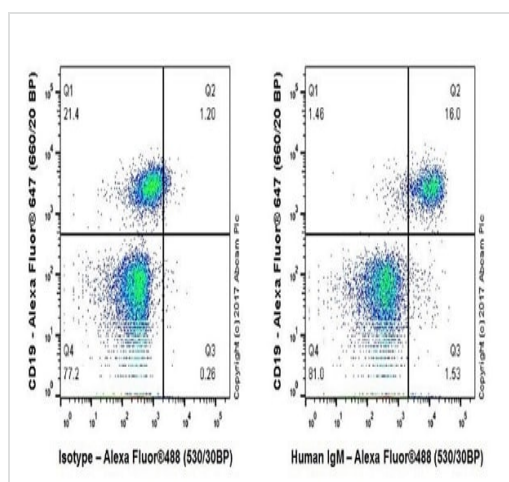
The molecular mass observed is consistent with the literature (PMID 16199094; PMID: 15955802; PMID 2107027).

Blocking and dilution buffer: 5% NFDM/TBST.

Exposure times.

Lanes 1 & 3: 3 minutes.

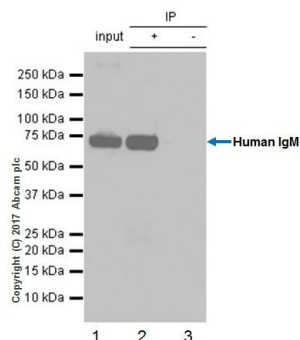
Lane 2: 10 seconds.



Flow Cytometry - Anti-Human IgM antibody
[EPR20731] (ab212201)

Flow cytometric analysis of human PBMC (peripheral blood mononuclear cells) cell line labeling IgM with ab212201 at 1/50 (right panel) compared with an isotype control details ([ab172730](#)) (left panel). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) ([ab150077](#)), at 1/2000 dilution was used as the secondary antibody.

Human PBMCs co-stained with anti-CD19 (Y-axis); only CD19+ population give a positive signal for IgM. Gated on total viable cells.



Immunoprecipitation - Anti-Human IgM antibody
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IgM was immunoprecipitated from 0.35 mg of Raji (human Burkitt's lymphoma cell line) whole cell lysate with ab212201 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab212201 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/10,000 dilution.

Lane 1: Raji whole cell lysate 10 µg (Input).

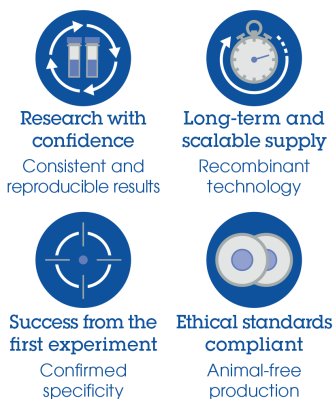
Lane 2: ab212201 IP in Raji whole cell lysate.

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab212201 in Raji whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDm/TBST.

Exposure time: 10 seconds.

Why choose a recombinant antibody?



Anti-Human IgM antibody [EPR20731] (ab212201)

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

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