abcam

ab134050

Anti-IgG2 antibody [EPR4418]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR4418
Purification technique	Affinity purification Protein A
Specificity	ab134050 does not cross-react with human IgG1, IgG3 or IgG4.
Concentration	1.075 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/40000
Notes	For unpurified use at 1/500-1/1000

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

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

I-ELISA

Tested

Species	Human
Dilution info	1000 ng/mL
Notes	-

WB

Tested

Species	Human
Dilution info	1/5000
Notes	**For unpurified use at 1/10000-1/20000**

ICC/IF

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/70
Notes	-

Target data

See full target information IGHG2

Function

Constant region of immunoglobulin (Ig) heavy chains. Igs are membrane-bound or secreted glycoproteins produced by B lymphocytes. In the recognition phase of humoral immunity, the membrane-bound Igs serve as receptors, which upon binding to a specific antigen trigger the clonal expansion and differentiation of B lymphocytes into Ig-secreting plasma cells. Secreted Igs known as antibodies mediate the effector phase of humoral immunity by blocking the interaction of infectious antigens with cellular receptors (via the antigen-binding region) and eliciting effector mechanisms that lead to pathogen neutralization (via the constant region) (PubMed:17576170, PubMed:20176268, PubMed:22158414). The antigen-binding region is formed by the variable domain of one heavy chain paired with the variable domain of its associated light chain. Each Ig molecule has two antigen-binding sites with remarkable affinity for a particular antigen due to V-(D)-J rearrangement, somatic hypermutations and affinity maturation of the variable domains upon antigen exposure (PubMed:17576170, PubMed:20176268, PubMed:22158414). The constant region defines the Ig isotype that perform distinct sets of effector functions. B cells diversify and rearrange their Ig constant regions through class-switch recombination, a process by which the constant region is switched from one Ig isotype to another, namely from IgM and IgD to IgG, IgA and IgE (PubMed:17576170, PubMed:20176268, PubMed:22158414). The constant region interacts (via the fragment crystallizable, Fc) with receptors on innate immune cells and the complement system to mediate humoral effector functions. Ig gamma-2 (IgG2) isotype formed against polysaccharide structures found on encapsulated bacteria elicits antibody-dependent protection through activation of complement pathway.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Stable for 12 months at -20°C

Notes

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

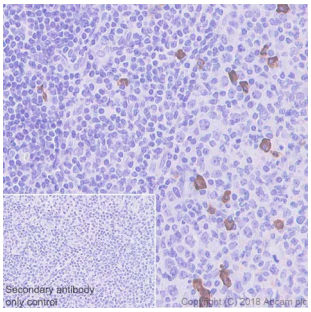
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

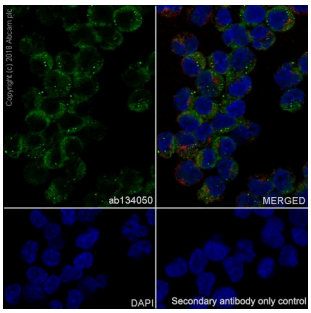
8 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IgG2 antibody [EPR4418] (ab134050)

IgG2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-IgG2 antibody

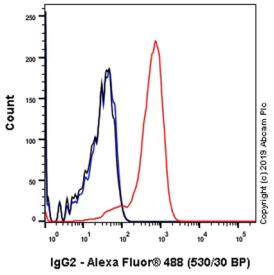
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human tonsil tissue sections labeling IgG2 with purified ab134050 at 1:40000 dilution (0.025 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunocytochemistry/ Immunofluorescence - Anti-IgG2 antibody [EPR4418] (ab134050)

IgG2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-IgG2 antibody

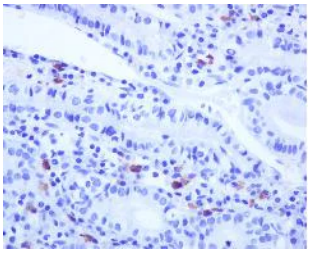
Immunocytochemistry/ Immunofluorescence analysis of Raji (human Burkitt's lymphoma cell line) cells labeling IgG2 with purified ab134050 at 1:100 dilution (10 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Flow Cytometry (Intracellular) - Anti-IgG2 antibody [EPR4418] (ab134050)

IgG2 Flow Cytometry (Intracellular) staining using rabbit Anti-IgG2 antibody

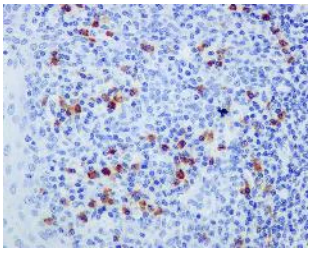
Intracellular Flow Cytometry analysis of Raji (human Burkitt's lymphoma cell line) cells labeling IgG2 with purified ab134050 at 1/100 dilution (10µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IgG2 antibody [EPR4418] (ab134050)

IgG2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-IgG2 antibody

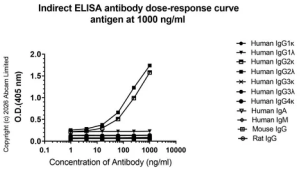
Immunohistochemical analysis of paraffin-embedded human thyroid gland tissue labeling IgG2 with unpurified ab134050 at 1/500 dilution.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IgG2 antibody [EPR4418] (ab134050)

IgG2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-IgG2 antibody

Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling IgG2 with unpurified ab134050 at 1/500 dilution.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

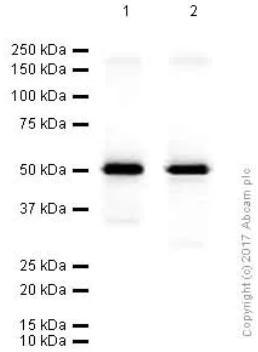


Indirect ELISA - Anti-IgG2 antibody [EPR4418] (ab134050)

Indirect ELISA analysis of ab134050 at 1000-0 ng/ml. The Secondary antibody used was Alkaline Phosphatase-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L) at 1:2500 dilution.

Antigen: Human IgG1κ, Human IgG1λ, Human IgG2κ, Human IgG2λ, Human IgG3κ, Human IgG3λ, Human IgG4κ, Human IgA, Human IgM, Mouse IgG, Rat IgG.

Antigen concentration: 1000 ng/ml



Western blot - Anti-IgG2 antibody [EPR4418] (ab134050)

All lanes:
Western blot - Anti-IgG2 antibody [EPR4418] (ab134050) at 1/5000 dilution

Lane 1:
Human spleen lysates at 15 µg

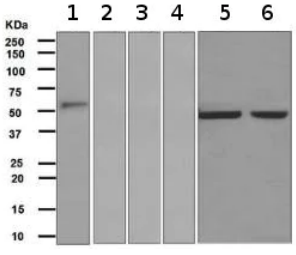
Lane 2:
Human tonsil lysates at 15 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 36 kDa

Observed band size: 52 kDa



Western blot - Anti-IgG2 antibody [EPR4418] (ab134050)

All lanes:
Western blot - Anti-IgG2 antibody [EPR4418] (ab134050) at 1/10000 dilution

Lane 1:
Human Recombinant IgG2 at 0.01 µg

Lane 2:
Human Recombinant IgG1 at 0.01 µg

Lane 3:
Human Recombinant IgG3 at 0.01 µg

Lane 4:
Human Recombinant IgG4 at 0.01 µg

Lane 5:
Human spleen lysate at 10 µg

Lane 6:
Human tonsil lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 36 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.