

## Product datasheet

# Anti-Human IgG antibody [EPR4421] ab109489

Recombinant RabMAb

★★★★☆ 3 Abreviews 64 References 8 Images

### Overview

<b>Product name</b>	Anti-Human IgG antibody [EPR4421]
<b>Description</b>	Rabbit monoclonal [EPR4421] to Human IgG
<b>Host species</b>	Rabbit
<b>Specificity</b>	ab109489 recognizes all four Human IgG isotypes (IgG1, IgG2, IgG3, and IgG4).
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide within Human Human IgG aa 150-250 (internal sequence). The exact sequence is proprietary.
<b>Positive control</b>	WB: Human IgG2, IgG1, IgG3, and IgG4 recombinant proteins, human fetal thymus, fetal tonsil and fetal spleen tissue lysates. IHC-P: Human tonsil and stomach tissues.
<b>General notes</b>	<p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> <p><b>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.</b></p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and</p>

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

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<b>Form</b>	Liquid
<b>Storage instructions</b>	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.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 59% PBS, 0.05% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR4421
<b>Isotype</b>	IgG

## Applications

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Our [Abpromise guarantee](#) covers the use of **ab109489** 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 - 1/10000. Detects a band of approximately 52-58 kDa.
IHC-P	★★★★★	1/300 - 1/1000. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See <a href="#">IHC antigen retrieval protocols</a> .

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## Target

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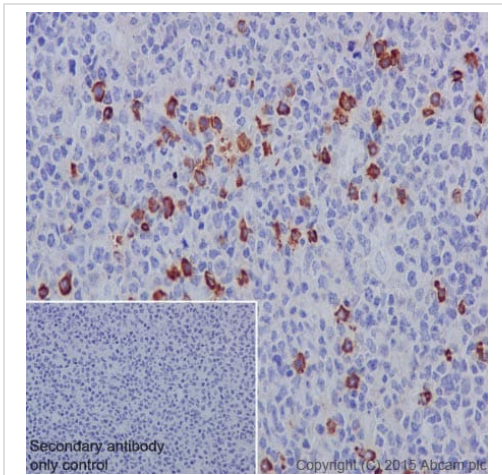
**Relevance** IgG is a monomeric immunoglobulin, built of two heavy chains gamma and two light chains. Each molecule has two antigen binding sites. This is the most abundant immunoglobulin and is approximately equally distributed in blood and in tissue liquids, constituting 75% of serum immunoglobulins in humans. This is the only isotype that can pass through the human placenta,

thereby providing protection to the fetus in its first weeks of life before its own immune system has developed. It can bind to many kinds of pathogens, for example viruses, bacteria, and fungi, and protects the body against them by complement activation (classic pathway), opsonization for phagocytosis and neutralisation of their toxins. There are 4 subclasses: IgG1 (66%), IgG2 (23%), IgG3 (7%) and IgG4 (4%).

## Cellular localization

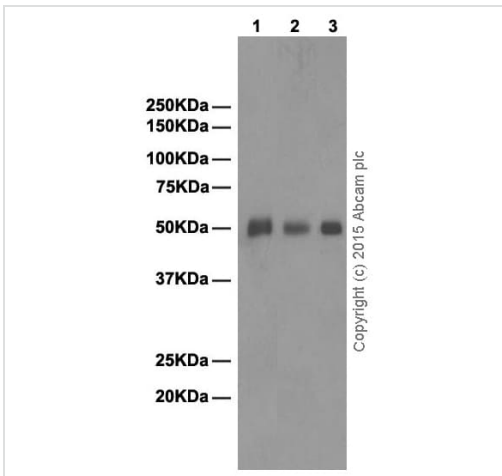
Cell Membrane and Secreted

## Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Human IgG antibody [EPR4421] (ab109489)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human tonsil tissue labeling Human IgG with purified ab109489 at 1/300. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. [ab97051](#), a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Western blot - Anti-Human IgG antibody [EPR4421] (ab109489)

**All lanes :** Anti-Human IgG antibody [EPR4421] (ab109489) at 1/20000 dilution (purified)

**Lane 1 :** Human fetal thymus tissue lysate

**Lane 2 :** Human fetal tonsil tissue lysate

**Lane 3 :** Human fetal spleen tissue lysate

Lysates/proteins at 20 µg per lane.

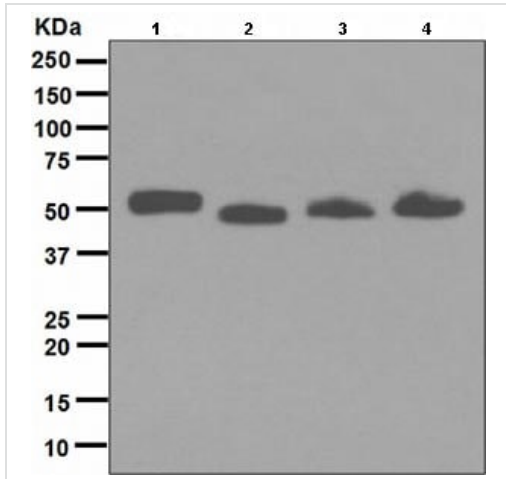
### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/50000 dilution

**Observed band size:** 50 kDa

[why is the actual band size different from the predicted?](#)

Blocking and dilution buffer: 5% NFDM/TBST.



Western blot - Anti-Human IgG antibody [EPR4421] (ab109489)

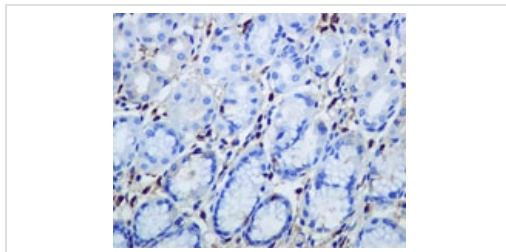
**All lanes :** Anti-Human IgG antibody [EPR4421] (ab109489) at 1/1000 dilution (unpurified)

**Lane 1 :** IgG2 recombinant protein (10 ng protein loaded)

**Lane 2 :** IgG1 recombinant protein (10 ng protein loaded)

**Lane 3 :** IgG3 recombinant protein (10 ng protein loaded)

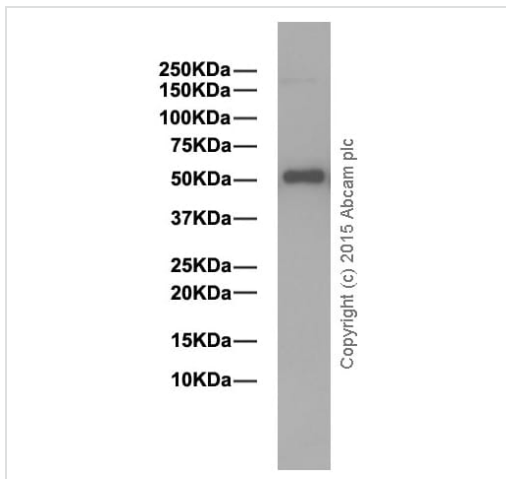
**Lane 4 :** IgG4 recombinant protein (10 ng protein loaded)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Human IgG antibody [EPR4421] (ab109489)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human stomach tissue labelling IgG with unpurified ab109489 at a dilution of 1/500.

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



Western blot - Anti-Human IgG antibody [EPR4421] (ab109489)

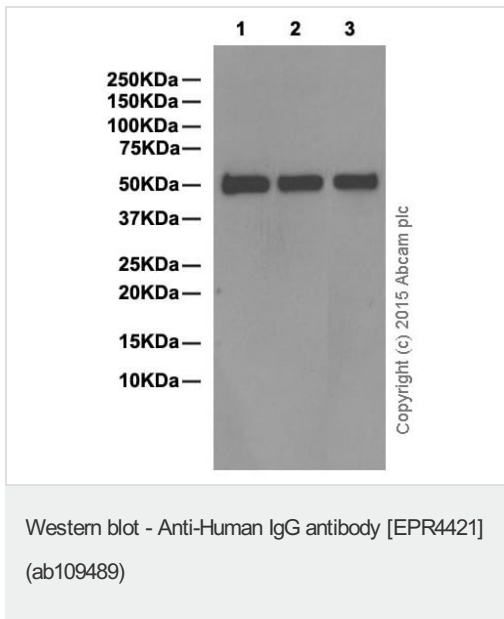
Anti-Human IgG antibody [EPR4421] (ab109489) at 1/1000 dilution (purified) + IgG3 recombinant protein at 0.01 µg

**Secondary**

Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

**Observed band size:** 50 kDa [why is the actual band size different from the predicted?](#)

Blocking and dilution buffer: 5% NFDM/TBST.



**All lanes :** Anti-Human IgG antibody [EPR4421] (ab109489) at 1/5000 dilution (purified)

**Lane 1 :** IgG1 recombinant protein

**Lane 2 :** IgG2 recombinant protein

**Lane 3 :** IgG4 recombinant protein

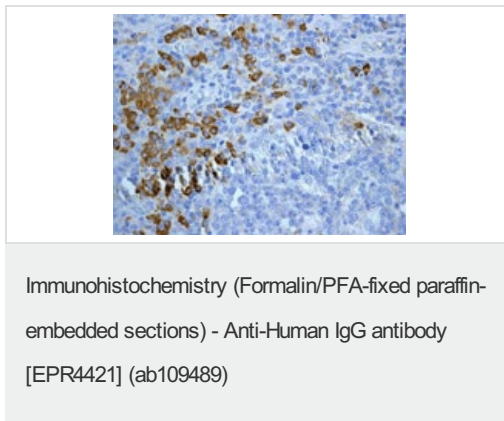
Lysates/proteins at 0.01 µg per lane.

### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

**Observed band size:** 50 kDa [why is the actual band size different from the predicted?](#)





Blocking and dilution buffer: 5% NFDM/TBST.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human tonsil tissue labelling IgG with unpurified ab109489 at a dilution of 1/500.

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

Why choose a recombinant antibody?

 <p><b>Research with confidence</b> Consistent and reproducible results</p>	 <p><b>Long-term and scalable supply</b> Recombinant technology</p>
 <p><b>Success from the first experiment</b> Confirmed specificity</p>	 <p><b>Ethical standards compliant</b> Animal-free production</p>

Anti-Human IgG antibody [EPR4421] (ab109489)

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

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- Extensive multi-media technical resources to help you
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