

# Anti-Glucose 6 Phosphate Dehydrogenase antibody [EPR20668] - BSA and Azide free ab231828

Recombinant RabMAb

★★★★★ [2 Abreviews](#) [4 References](#) [11 Images](#)

## Overview

<b>Product name</b>	Anti-Glucose 6 Phosphate Dehydrogenase antibody [EPR20668] - BSA and Azide free
<b>Description</b>	Rabbit monoclonal [EPR20668] to Glucose 6 Phosphate Dehydrogenase - BSA and Azide free
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> Flow Cyt (Intra), WB, ICC/IF, IP, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	IHC-P: Human liver tissue.
<b>General notes</b>	<p>ab231828 is the carrier-free version of <a href="#">ab210702</a>.</p> <p>Our <b>carrier-free</b> antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>Use our <a href="#">conjugation kits</a> for antibody conjugates that are ready-to-use in as little as 20 minutes with &lt;1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p> <p>This product is compatible with the Maxpar<sup>®</sup> Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar<sup>®</sup> is a trademark of Fluidigm Canada Inc.</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>

## Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR20668
Isotype	IgG

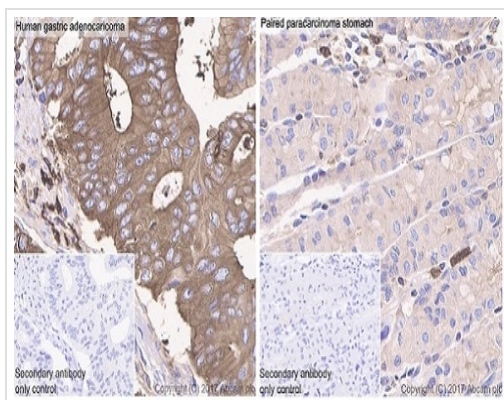
## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab231828 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
Flow Cyt (Intra)		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Detects a band of approximately 59 kDa (predicted molecular weight: 59 kDa).
ICC/IF		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

## Target

Function	Catalyzes the rate-limiting step of the oxidative pentose-phosphate pathway, which represents a route for the dissimilation of carbohydrates besides glycolysis. The main function of this enzyme is to provide reducing power (NADPH) and pentose phosphates for fatty acid and nucleic acid synthesis.
Tissue specificity	Isoform Long is found in lymphoblasts, granulocytes and sperm.
Pathway	Carbohydrate degradation; pentose phosphate pathway; D-ribulose 5-phosphate from D-glucose 6-phosphate (oxidative stage): step 1/3.
Involvement in disease	Anemia, non-spherocytic hemolytic, due to G6PD deficiency
Sequence similarities	Belongs to the glucose-6-phosphate dehydrogenase family.
Post-translational modifications	Acetylated by ELP3 at Lys-403; acetylation inhibits its homodimerization and enzyme activity. Deacetylated by SIRT2 at Lys-403; deacetylation stimulates its enzyme activity.



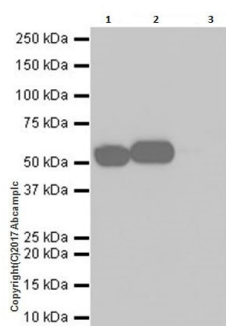
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose 6 Phosphate Dehydrogenase antibody [EPR20668] - BSA and Azide free (ab231828)

Immunohistochemical analysis of paraffin-embedded human gastric adenocarcinoma tissue (left panel) and human gastric paracarcinoma (right panel) labeling Glucose 6 Phosphate Dehydrogenase with [ab210702](#) at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Strong cytoplasmic staining on human gastric adenocarcinoma, compared with weak cytoplasmic staining on the paired paracarcinoma stomach (PMID: 22012600). Both tissue sections are derived from the same patient sample. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab210702](#)).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-Glucose 6 Phosphate Dehydrogenase antibody [EPR20668] - BSA and Azide free (ab231828)

Glucose 6 Phosphate Dehydrogenase was immunoprecipitated from 0.35mg of HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate with [ab210702](#) at 1/40 dilution. Western blot was performed from the immunoprecipitate using [ab210702](#) at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/10000 dilution.

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

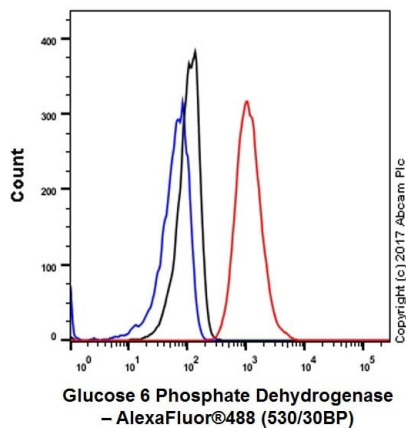
Lane 2: [ab210702](#) IP in HeLa whole cell lysate.

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of [ab210702](#) in HeLa whole cell lysate.

Blocking/Dilution buffer: 5% NFDm/TBST.

Exposure time: 30 seconds.

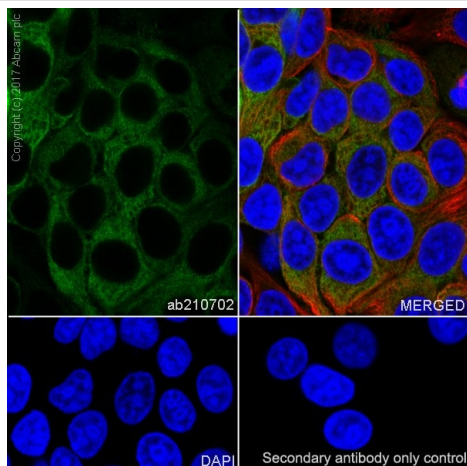
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab210702](#)).



Flow Cytometry (Intracellular) - Anti-Glucose 6 Phosphate Dehydrogenase antibody [EPR20668] - BSA and Azide free (ab231828)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cell line labeling Glucose 6 Phosphate Dehydrogenase with **ab210702** at 1/400 (red) compared with an Isotype control rabbit monoclonal IgG (**ab172730**) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab210702**).



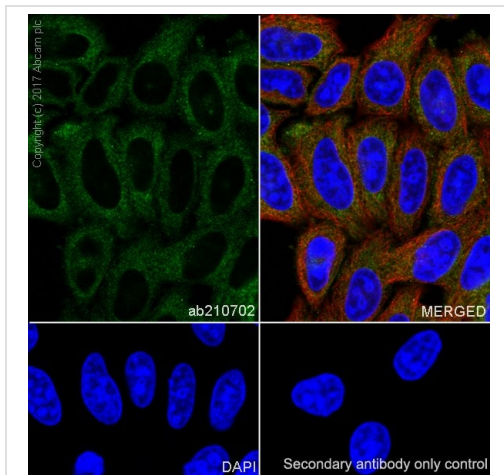
Immunocytochemistry/ Immunofluorescence - Anti-Glucose 6 Phosphate Dehydrogenase antibody [EPR20668] - BSA and Azide free (ab231828)

Immunofluorescent analysis of methanol-fixed MCF7 (human breast adenocarcinoma cell line) cells labeling Glucose 6 Phosphate Dehydrogenase with **ab210702** 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 on MCF7 cell line.

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

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

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab210702**).



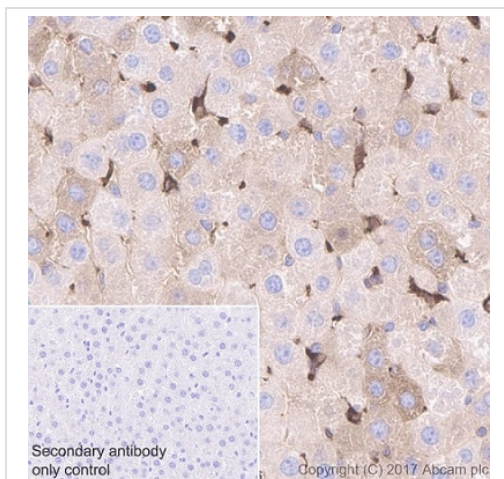
Immunocytochemistry/ Immunofluorescence - Anti-Glucose 6 Phosphate Dehydrogenase antibody [EPR20668] - BSA and Azide free (ab231828)

Immunofluorescent analysis of methanol-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling Glucose 6 Phosphate Dehydrogenase with **ab210702** 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 on HeLA cell line.

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

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

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab210702**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose 6 Phosphate Dehydrogenase antibody [EPR20668] - BSA and Azide free (ab231828)

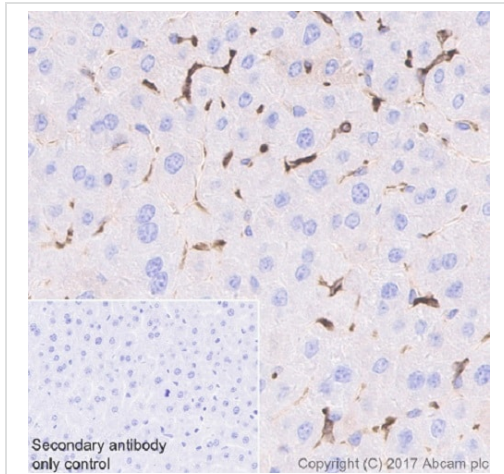
Immunohistochemical analysis of paraffin-embedded rat liver tissue labeling Glucose 6 Phosphate Dehydrogenase with **ab210702** at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Cytoplasmic staining on rat liver (PMID: 24994855, PMID: 26583321). Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab210702**).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.





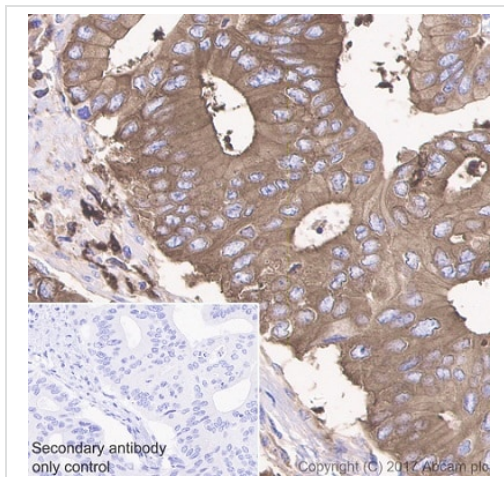
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose 6 Phosphate Dehydrogenase antibody [EPR20668] - BSA and Azide free (ab231828)

Immunohistochemical analysis of paraffin-embedded mouse liver tissue labeling Glucose 6 Phosphate Dehydrogenase with **ab210702** at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Cytoplasmic staining on stroma of mouse liver (PMID: 24994855, PMID: 26583321). Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab210702**).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



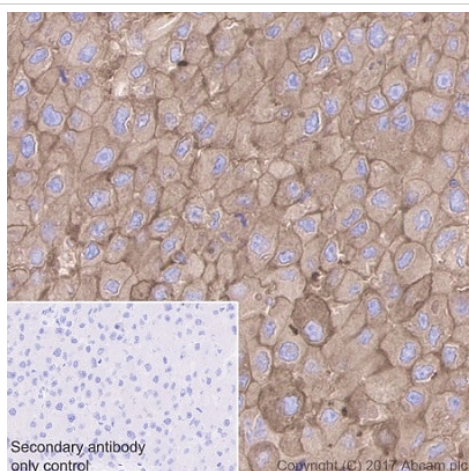
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose 6 Phosphate Dehydrogenase antibody [EPR20668] - BSA and Azide free (ab231828)

Immunohistochemical analysis of paraffin-embedded human gastric adenocarcinoma tissue labeling Glucose 6 Phosphate Dehydrogenase with **ab210702** at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Strong cytoplasmic staining on human gastric adenocarcinoma (PMID: 22012600). Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab210702**).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

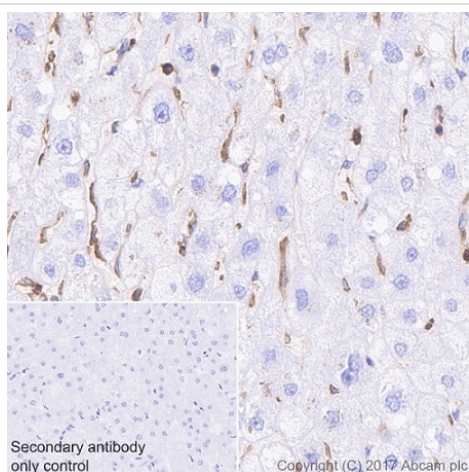


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose 6 Phosphate Dehydrogenase antibody [EPR20668] - BSA and Azide free (ab231828)

Immunohistochemical analysis of paraffin-embedded human hepatocellular carcinoma tissue labeling Glucose 6 Phosphate Dehydrogenase with **ab210702** at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Staining on hepatocellular carcinoma (PMID: 24994855, PMID: 26583321). Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab210702**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose 6 Phosphate Dehydrogenase antibody [EPR20668] - BSA and Azide free (ab231828)

Immunohistochemical analysis of paraffin-embedded human liver tissue labeling Glucose 6 Phosphate Dehydrogenase with **ab210702** at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Cytoplasmic staining on stroma of human liver (PMID: 24994855, PMID: 26583321). Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab210702**).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-Glucose 6 Phosphate Dehydrogenase antibody  
[EPR20668] - BSA and Azide free (ab231828)

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

### Our Abpromise to you: Quality guaranteed and expert technical support

---

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

### Terms and conditions

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors