


Product datasheet

# Anti-Glucose 6 Phosphate Dehydrogenase antibody ab993

★★★★☆ 11 Abreviews 14 References 4 Images

Overview

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<b>Product name</b>	Anti-Glucose 6 Phosphate Dehydrogenase antibody
<b>Description</b>	Rabbit polyclonal to Glucose 6 Phosphate Dehydrogenase
<b>Tested applications</b>	<b>Suitable for:</b> IHC-Fr, IP, WB, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human <b>Predicted to work with:</b> Chimpanzee, Baboon, Cynomolgus monkey, Rhesus monkey, Gorilla 
<b>Immunogen</b>	Synthetic peptide within Human Glucose 6 Phosphate Dehydrogenase aa 50-100. The exact sequence is proprietary. Database link: <a href="#">P11413</a>
<b>Positive control</b>	WB: HeLa, HEK-293T and NIH/3T3 whole cell lysates;. ICC/IF: HUVEC cells. IHC-Fr: Mouse skeletal muscle tissue.

Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
<b>Storage buffer</b>	Preservative: 0.1% Sodium Azide Constituents: 8mM PBS, 60mM Citrate, 150mM Tris, pH 7-8
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

Applications

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Our [Abpromise guarantee](#) covers the use of **ab993** in the following tested applications.

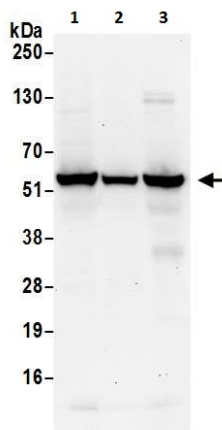
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-Fr	★★★★★	1/500.
IP		Use at 2-10 µg/mg of lysate.
WB	★★★★☆	1/1000 - 1/10000. Predicted molecular weight: 59 kDa.
ICC/IF	★★★★★	Use a concentration of 5 µg/ml.

## Target

<b>Function</b>	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.
<b>Tissue specificity</b>	Isoform Long is found in lymphoblasts, granulocytes and sperm.
<b>Pathway</b>	Carbohydrate degradation; pentose phosphate pathway; D-ribulose 5-phosphate from D-glucose 6-phosphate (oxidative stage): step 1/3.
<b>Involvement in disease</b>	Anemia, non-spherocytic hemolytic, due to G6PD deficiency
<b>Sequence similarities</b>	Belongs to the glucose-6-phosphate dehydrogenase family.
<b>Post-translational modifications</b>	Acetylated by ELP3 at Lys-403; acetylation inhibits its homodimerization and enzyme activity. Deacetylated by SIRT2 at Lys-403; deacetylation stimulates its enzyme activity.

## Images



Western blot - Anti-Glucose 6 Phosphate  
Dehydrogenase antibody (ab993)

**All lanes :** Anti-Glucose 6 Phosphate  
Dehydrogenase antibody (ab993) at 1 µg/ml

**Lane 1 :** HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

**Lane 2 :** HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate

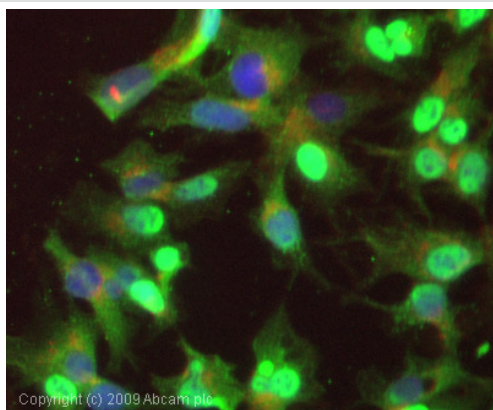
**Lane 3 :** NIH/3T3 (mouse embryo fibroblast cell line) whole cell lysate

Lysates/proteins at 50 µg per lane.

Developed using the ECL technique

**Predicted band size :** 59 kDa

**Exposure time :** 30 seconds



Immunocytochemistry/ Immunofluorescence - Anti-Glucose 6 Phosphate Dehydrogenase antibody (ab993)

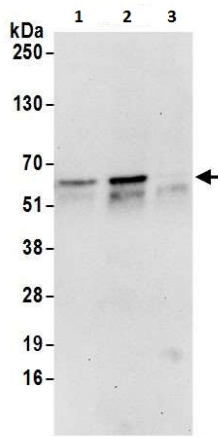
ICC/IF image of ab993 stained MCF7 cells.

The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions.

The cells were then incubated with the antibody (ab993 5µg/ml) overnight at +4°C.

The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594

WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Immunoprecipitation - Anti-Glucose 6 Phosphate Dehydrogenase antibody (ab993)

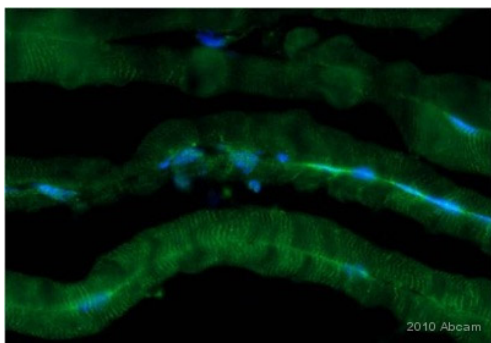
Glucose 6 Phosphate Dehydrogenase was immunoprecipitated from NIH/3T3 (mouse embryo fibroblast cell line) whole cell lysate (1 mg for IP, 20% of IP loaded) with ab993 at 6  $\mu\text{g}/\text{mg}$  lysate. Western blot was performed from the immunoprecipitate using ab993 at 1  $\mu\text{g}/\text{ml}$ .

Lane 1: ab993 (batch 3) IP in NIH/3T3 whole cell lysate.

Lane 2: ab993 (batch 4) IP in NIH/3T3 whole cell lysate.

Lane 3: Control IgG IP in NIH/3T3 whole cell lysate.

Detection: Chemiluminescence with exposure time of 30 seconds.



Immunohistochemistry (Frozen sections) - Anti-Glucose 6 Phosphate Dehydrogenase antibody (ab993)

This image is courtesy of an anonymous Abreview

ab993 staining Glucose 6 phosphate dehydrogenase in Mouse skeletal muscle tissue sections by IHC-Fr (frozen sections). Tissue was fixed with formaldehyde, permeabilized with 0.1% Triton X-100 and blocked with 5% serum for 2 hours at 25°C. Samples were incubated with primary antibody (1/500 in PBS Tween 20) for 12 hours at 4°C. An Alexa Fluor<sup>®</sup>-conjugated goat anti-rabbit IgG polyclonal (1/500) was used as secondary antibody.

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