abcam

Product datasheet

Anti-Glucose 6 Phosphate Dehydrogenase antibody ab87230

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Overview

Product name	Anti-Glucose 6 Phosphate Dehydrogenase antibody
Description	Rabbit polyclonal to Glucose 6 Phosphate Dehydrogenase
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat, Sheep, Horse, Cow, Cat, Dog, Turkey, Zebrafish, Macaque monkey, Chinese hamster
Immunogen	Synthetic peptide corresponding to Human Glucose 6 Phosphate Dehydrogenase aa 450 to the C-terminus (C terminal) conjugated to keyhole limpet haemocyanin. (Peptide available as **ab87368**)
Positive control	Recombinant human Glucose 6 Phosphate Dehydrogenase protein (**ab126671**) can be used as a positive control in WB. This antibody gave a positive signal in RAW 264.7 and Jurkat Whole Cell Lysates, and in Human Lymph node Tissue Lysate.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. 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, along with publications, customer reviews and Q&As

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 or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS

	Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab87230 in the following tested applications.

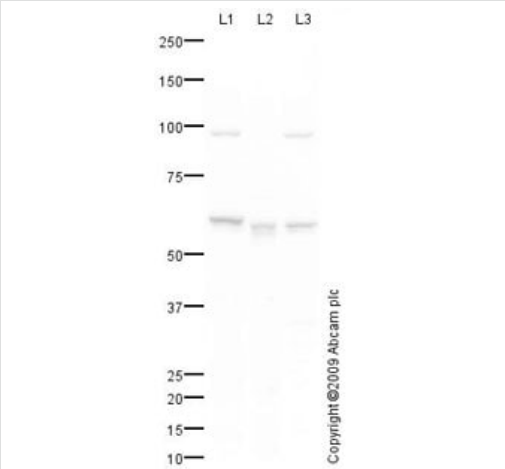
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (1)	Use a concentration of 1 µg/ml. Detects a band of approximately 59 kDa (predicted molecular weight: 59 kDa).
IHC-P		Use a concentration of 10 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
ICC/IF		Use a concentration of 1 µg/ml.

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.

Images



Western blot - Anti-Glucose 6 Phosphate Dehydrogenase antibody (ab87230)

All lanes : Anti-Glucose 6 Phosphate Dehydrogenase antibody (ab87230) at 1 µg/ml

Lane 1 : RAW 264.7 (Mouse leukaemic monocyte macrophage cell line) Whole Cell Lysate
Lane 2 : Human lymph node tissue lysate - total protein (**ab29871**)
Lane 3 : Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

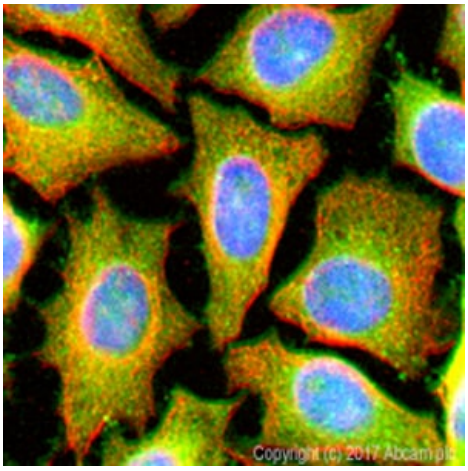
Secondary
All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

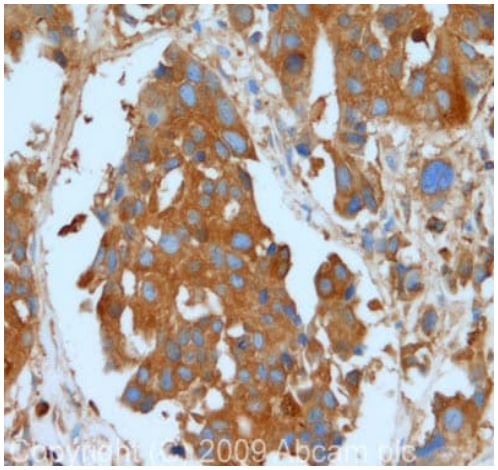
Predicted band size: 59 kDa
Observed band size: 59 kDa
Additional bands at: 95 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 30 seconds



Immunocytochemistry/ Immunofluorescence - Anti-Glucose 6 Phosphate Dehydrogenase antibody (ab87230)

ab87230 stained in Hela cells. Cells were fixed with 4% paraformaldehyde (10min) at room temperature and incubated with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% triton for 1h at room temperature to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab87230 at 1µg/ml and **ab7291** (Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control) at 1/1000 dilution overnight at +4°C. The secondary antibodies were **ab150120** (pseudo-colored red) and **ab150081** (colored green) used at 1 ug/ml for 1hour at room temperature. DAPI was used to stain the cell nuclei (colored blue) at a concentration of 1.43µM for 1hour at room temperature



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glucose 6 Phosphate Dehydrogenase antibody (ab87230)

IHC image of Glucose 6 Phosphate Dehydrogenase staining in human breast carcinoma formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab87230, 10µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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