abcam

ab154180

Anti-PGM2 antibody [PGM2]

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	PGM2
Purification technique	Affinity purification Protein A
Concentration	0.604 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information PGM2

Function	Catalyzes the conversion of the nucleoside breakdown products ribose-1-phosphate and deoxyribose-1-phosphate to the corresponding 5-phosphopentoses (PubMed:17804405). Catalyzes the reversible isomerization of alpha-D-glucose 1-phosphate to alpha-D-glucose 6-phosphate but with a lower catalytic efficiency (PubMed:17804405). The mechanism proceeds via the intermediate compound alpha-D-glucose 1,6-bisphosphate (PubMed:17804405). In vitro, also has a low glucose 1,6-bisphosphate synthase activity which is most probably not physiologically relevant (PubMed:17804405, PubMed:18927083).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

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.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Phosphoglucomutase 2 also known as PGM2 is an enzyme involved in carbohydrate metabolism. It catalyzes the reversible conversion of glucose-1-phosphate to glucose-6-phosphate an essential step in glycogenesis and glycogenolysis. PGM2 has a mass of about 65 kDa and is expressed in various tissues including liver muscle and brain. It is often expressed in cells that require significant amounts of energy due to its role in glucose utilization.
Biological function summary	PGM2 functions to maintain cellular energy balance by supporting glycogen storage and breakdown. It operates as an individual enzyme not being part of any multi-enzyme complex but it significantly impacts glucose flux within cells. The enzyme plays a role in both anabolic and catabolic processes highlighting its importance in energy homeostasis. Adequate functioning of PGM2 ensures that cells have access to glucose during fasting or between meals vital for processes like muscle contraction and brain function.
Pathways	PGM2 is actively involved in the glycogen metabolism pathway and interacts with key enzymes like glycogen phosphorylase and glycogen synthase. Its enzymatic activity links it to pathways such as glycolysis where glucose-6-phosphate serves as a substrate. Through its role in glucose conversion PGM2 influences the availability of substrate for additional enzymes in glycolysis and glycogenesis impacting energy production and storage in cells.
Associated diseases and disorders	Defects in PGM2 have been associated with glycogen storage disease which affects glucose and glycogen metabolism leading to energy production issues. It is also observed in metabolic myopathies where disordered energy metabolism leads to muscle weakness and fatigue. PGM2 interacts with glycogen phosphorylase in these disorders as both play parts in the conversion of glucose-1-phosphate to glucose-6-phosphate implicating their coordination in maintaining metabolic stability.

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.

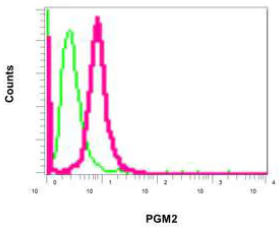
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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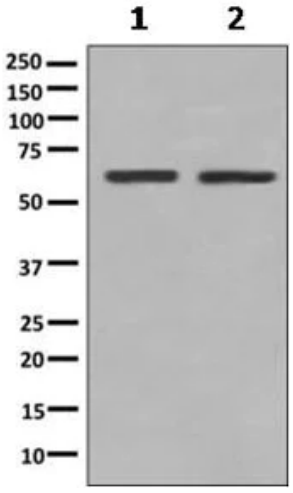
2 product images



Flow Cytometry (Intracellular) - Anti-PGM2 antibody [PGM2] (ab154180)

PGM2 Flow Cytometry (Intracellular) staining using rabbit Anti-PGM2 antibody

Intracellular flow cytometric analysis of permeabilized Jurkat cells with ab154180 at 1/100 dilution (red) or a rabbit IgG (negative) (green).



Western blot - Anti-PGM2 antibody [PGM2] (ab154180)

All lanes:
Western blot - Anti-PGM2 antibody [PGM2] (ab154180) at 1/1000 dilution

Lane 1:
K562 cell lysates at 10 µg

Lane 2:
Jurkat cell lysates at 10 µg

Secondary

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

Predicted band size: 68 kDa

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