abcam

ab183027

Anti-PGAM2 antibody [EPR15193(B)]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 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	EPR15193(B)
Purification technique	Affinity purification Protein A
Concentration	0.103 - 0.107 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/500
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30 - 1/50
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/20
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information PGAM2

Function	Catalyzes the interconversion of 3- and 2-phosphoglycerate with 2,3-bisphosphoglycerate as the primer of the reaction. Can also catalyze the interconversion of (2R)-2,3-bisphosphoglycerate and (2R)-3-phospho-glyceroyl phosphate, but with a reduced activity.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
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

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	PGAM2 or phosphoglycerate mutase 2 is an enzyme and plays an important role in glycolysis. This enzyme catalyzes the conversion of 3-phosphoglycerate to 2-phosphoglycerate. PGAM2 is known for its molecular weight of approximately 29 kDa. It expresses in skeletal muscle tissue predominantly allowing it to help meet the energy demands during muscle contraction. The activity of PGAM2 is essential in tissues that require high energy supply.
Biological function summary	The enzyme PGAM2 is important in energy metabolism within the cells. It participates in the glycolytic pathway which leads to ATP production necessary for cell survival and functioning. PGAM2 acts as part of the glycolytic enzyme complex. By enabling the conversion of intermediates PGAM2 facilitates the continuous flow of the glycolytic cascade necessary for efficient energy extraction from glucose.
Pathways	PGAM2's function is central in glycolysis and gluconeogenesis. These pathways are essential for energy production and glucose homeostasis respectively. It collaborates with proteins such as enolase the enzyme responsible for converting 2-phosphoglycerate to phosphoenolpyruvate further down the glycolytic pathway. These interactions support the efficient production of ATP and gluconeogenic capabilities of the liver and kidney where energy conservation and storage are fundamental.
Associated diseases and disorders	PGAM2 deficiency has connections to metabolic and muscular conditions. One of the diseases associated with PGAM2 is glycogen storage disease type X also known as muscle phosphoglycerate mutase deficiency. It affects muscle function by disrupting glycolysis. Additionally aberrations in PGAM2 activity can associate with metabolic dysfunctions often connected to proteins such as lactate dehydrogenase which gatekeeps the final steps of anaerobic glycolysis. Studying PGAM2 deeply and its links to these diseases provides insights for potential therapeutic targets.

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

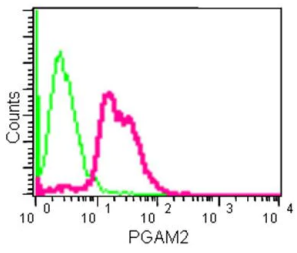
We do not recommend this combination. It is not covered by our product promise.

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.

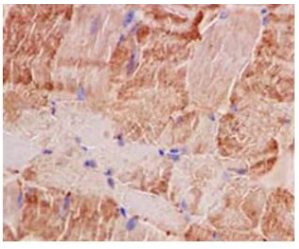
5 product images



Flow Cytometry (Intracellular) - Anti-PGAM2 antibody [EPR15193(B)] (ab183027)

PGAM2 Flow Cytometry (Intracellular) staining using rabbit Anti-PGAM2 antibody

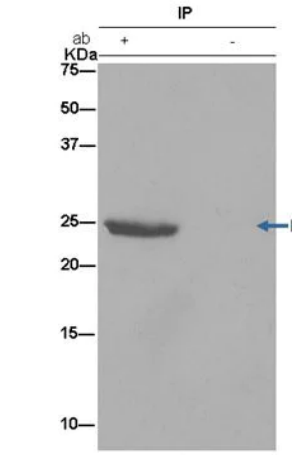
Intracellular Flow Cytometry analysis of Jurkat cells fixed with 2% paraformaldehyde, labeling PGAM2 with ab183027 at 1/20 dilution. Goatanti Rabbit IgG secondary antibody used at 1/150 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PGAM2 antibody [EPR15193(B)] (ab183027)

PGAM2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PGAM2 antibody

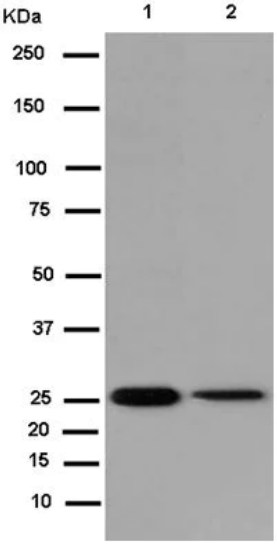
Immunohistochemistry analysis of paraffin embedded Human skeletal muscle tissue labeling PGAM2 with ab183027 at 1/500 dilution. Counterstained with Hematoxylin.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-PGAM2 antibody [EPR15193(B)] (ab183027)

Immunopreciptation analysis of Human skletal muscle lysate, labeling PGAM2 with ab183027 at 1/50 dilution (lane 1) and negative control (lane 2) Anti-Rabbit IgG (HRP) secondary antibody used at 1/1500 dilution (lane 1) and blocking buffer was 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-PGAM2 antibody [EPR15193(B)] (ab183027)

Predicted band size: 29 kDa



Western blot - Anti-PGAM2 antibody [EPR15193(B)] (ab183027)

PGAM2 Western blot staining using rabbit Anti-PGAM2 antibody

All lanes:
Western blot - Anti-PGAM2 antibody [EPR15193(B)] (ab183027) at 1/20000 dilution

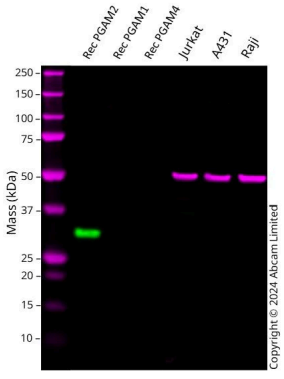
Lane 1:
Human skeletal muscle tissue lysate at 10 µg

Lane 2:
Human fetal heart tissue lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 29 kDa



Western blot - Anti-PGAM2 antibody [EPR15193(B)] (ab183027)

PGAM2 Western blot staining using rabbit Anti-PGAM2 antibody

Western blot: Anti-PGAM antibody [EPR15193(B)] (ab183027) staining at 1/10000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] (ab7291) loading control staining at 1/20000 dilution, shown in magenta. In Western blot, ab183027 was shown to bind specifically to PGAM. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.
All lanes:
Western blot - Anti-PGAM2 antibody [EPR15193(B)] (ab183027) at 1/10000 dilution

Lane 1:
Recombinant human PGAM2 protein (Active) ab219276 cell lysate at 0.1 µg

Lane 2:
Recombinant human PGAM1 protein (Active) ab289791 cell lysate at 0.1 µg

Lane 3:
PGAM4 Human Recombinant Protein cell lysate at 0.1 µg

Lane 4:
Jurkat cell lysate at 20 µg

Lane 5:
A431 cell lysate at 20 µg

Lane 6:
Raji cell lysate at 20 µg

Secondary

All lanes:
Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 29 kDa

Observed band size: 29 kDa

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