abcam

ab251158

# Anti-PGM1 antibody [EPR15241] - BSA and Azide free

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | EPR15241 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 1 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |

| | |
|---|---|
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## IP

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Mouse, Human, Rat |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## Target data

See full target information PGM1

| | |
|---|---|
| **Function** | Catalyzes the reversible isomerization of alpha-D-glucose 1-phosphate to alpha-D-glucose 6-phosphate (PubMed:15378030, PubMed:25288802). The mechanism proceeds via the intermediate compound alpha-D-glucose 1,6-bisphosphate (Probable) (PubMed:25288802). This enzyme participates in both the breakdown and synthesis of glucose (PubMed:17924679, PubMed:25288802). |

## Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |
| **Storage information** | Do Not Freeze |

## Notes

ab251158 is the carrier-free version of ab192876.

**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.

**Conjugation ready**
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. 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.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

**Compatibility**
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

## Supplementary info

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

| | |
|---|---|
| **Activity summary** | The Protein PGM1 also known as phosphoglucomutase-1 plays a significant mechanical role in cellular glucose metabolism. It catalyzes the interconversion of glucose-1-phosphate and glucose-6-phosphate a critical step in the glycolysis and gluconeogenesis pathways. The PGM1 protein has a molecular mass of approximately 61 kDa. Its expression occurs in various tissues with high levels in muscle and liver tissues which are key sites for energy storage and utilization. |
| **Biological function summary** | PGM1 contributes significantly to both energy homeostasis and carbohydrate metabolism. It functions as part of a dynamic complex involving other enzymes that manage intracellular energy balance. PGM1 supports glycogen synthesis and breakdown by regulating the availability of glucose-1-phosphate. This dual role makes PGM1 an important protein for maintaining normal metabolic function. Its activity impacts cellular energy levels which is vital for muscle contraction and overall energy distribution in tissues. |
| **Pathways** | PGM1 is critically involved in carbohydrate metabolic pathways specifically glycolysis and gluconeogenesis. In glycolysis it participates in converting glucose for energy production. In gluconeogenesis it assists in the generation of glucose from non-carbohydrate substrates. PGM1 interacts closely with other enzymes in these pathways such as glucose-6-phosphate dehydrogenase ensuring efficient energy regulation and metabolic flow within the cell. |
| **Associated diseases and disorders** | PGM1 is associated with glycogen storage disease type XIV which is a condition causing improper glycogen metabolism. Mutations in the PGM1 gene disrupt its enzymatic function leading to symptoms like muscle pain and weakness. Additionally PGM1 defects can impact another protein phosphoglucomutase-3 (PGM3) which shares pathway similarities and potentially affects the synthesis of other phosphorylated sugars related to immune function. These connections highlight the importance of functional PGM1 in maintaining normal physiological and disease-free states. |

## 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.

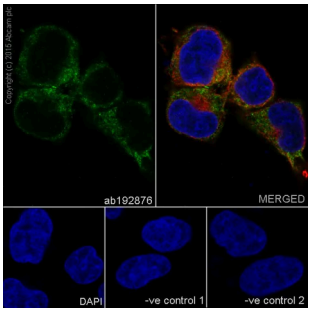
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We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

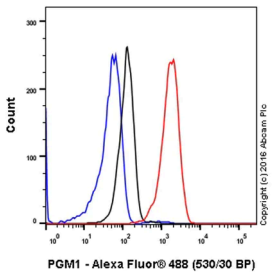
## 5 product images




### Immunocytochemistry/ Immunofluorescence - Anti-PGM1 antibody [EPR15241] - BSA and Azide free (ab251158)

PGM1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PGM1 antibody

This data was developed using ab192876, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% tritonX-100 permeabilized HeLa cells labeling PGM1 with ab192876 at 1/500 dilution followed by Goat anti rabbit IgG (AlexaFluor® 488) (ab150077) secondary antibody at 1/400 dilution. Nuclear counter stain is DAPI (blue).



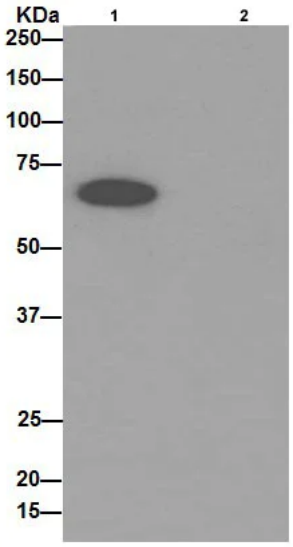

### Flow Cytometry (Intracellular) - Anti-PGM1 antibody [EPR15241] - BSA and Azide free (ab251158)

PGM1 Flow Cytometry (Intracellular) staining using rabbit Anti-PGM1 antibody

This data was developed using ab192876, the same antibody clone in a different buffer formulation.
ab192876 staining PGM1 in A549 (human lung carcinoma) by intracellular flow cytometry. Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. The sample was incubated with the primary antibody at a dilution of 1/90. A goat anti rabbit IgG (Alexa Fluor® 488) at a dilution of 1/2000 was used as the secondary antibody.

Isoytype control: Rabbit monoclonal IgG (Black)

Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue)



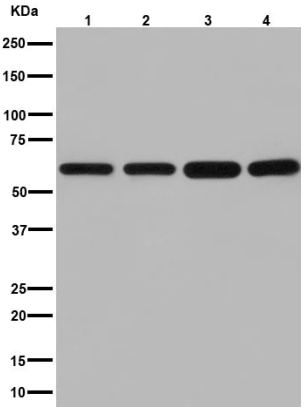

## Immunoprecipitation - Anti-PGM1 antibody [EPR15241] - BSA and Azide free (ab251158)

This data was developed using ab192876, the same antibody clone in a different buffer formulation.
Western blot analysis of PGM1 immunoprecipitated from Human fetal liver lysate with ab192876 at 1/60 dilution. Lane 1: Human fetal liver lysate. Lane 2: PBS instead of Human fetal liver lysate. Secondary: Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1500 dilution.

Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-PGM1 antibody [EPR15241] (ab192876)

Predicted band size: 61 kDa




## Western blot - Anti-PGM1 antibody [EPR15241] - BSA and Azide free (ab251158)

This data was developed using ab192876, the same antibody clone in a different buffer formulation.
**Blocking and dilution buffer:** 5% NFDM/TBST.

All lanes:
Western blot - Anti-PGM1 antibody [EPR15241] (ab192876) at 1/10000 dilution

Lane 1:
HepG2 cell lysate at 20 µg

Lane 2:
293T cell lysate at 20 µg

Lane 3:
Human fetal liver lysate at 20 µg

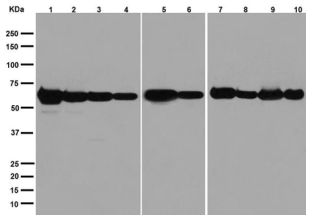
Lane 4:
Human fetal heart lysate at 20 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 61 kDa

Observed band size: 61 kDa




# Western blot - Anti-PGM1 antibody [EPR15241] - BSA and Azide free (ab251158)

This data was developed using ab192876, the same antibody clone in a different buffer formulation.
**Blocking and dilution buffer:** 5% NFDM/TBST.

All lanes:
Western blot - Anti-PGM1 antibody [EPR15241] (ab192876) at 1/1000 dilution

Lane 1:
Mouse brain tissue lysate at 10 µg

Lane 2:
Mouse heart tissue lysate at 10 µg

Lane 3:
Mouse kidney tissue lysate at 10 µg

Lane 4:
Mouse spleen tissue lysate at 10 µg

Lane 5:
Rat kidney tissue lysate at 10 µg

Lane 6:
Rat spleen tissue lysate at 10 µg

Lane 7:
C6 cell lysate at 10 µg

Lane 8:
RAW 264.7 cell lysate at 10 µg

Lane 9:
PC12 cell lysate at 10 µg

Lane 10:
NIH/3T3 cell lysate at 10 µg

Secondary

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

Predicted band size: 61 kDa

Observed band size: 61 kDa

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