abcam

Product datasheet

Anti-Pyruvate kinase isozyme M1 antibody ab156849

1 References 3 Images

Overview

Product name	Anti-Pyruvate kinase isozyme M1 antibody
Description	Rabbit polyclonal to Pyruvate kinase isozyme M1
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB
Species reactivity	**Reacts with:** Mouse **Predicted to work with:** Horse, Human, Chimpanzee, Macaque monkey, Gorilla, Orangutan
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	This antibody gave a positive signal in E14Tg2A whole cell lysate as well as the following Mouse tissue lysates: NIH 3T3, Skeletal Muscle; Heart; Brain. IHC-P: Mouse heart FFPE tissue sections.
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 ab156849 in the following tested applications.

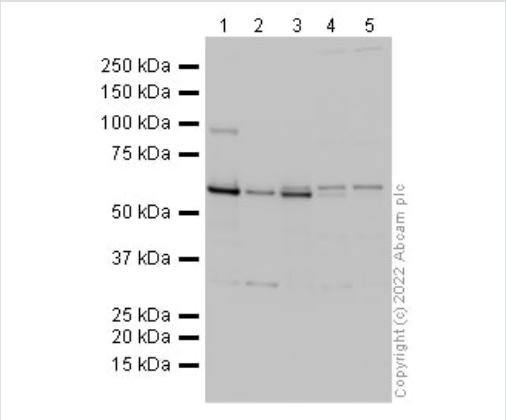
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 58 kDa (predicted molecular weight: 58 kDa).

Target

Function	Glycolytic enzyme that catalyzes the transfer of a phosphoryl group from phosphoenolpyruvate (PEP) to ADP, generating ATP. Stimulates POU5F1-mediated transcriptional activation. Plays a general role in caspase independent cell death of tumor cells. The ratio betwween the highly active tetrameric form and nearly inactive dimeric form determines whether glucose carbons are channeled to biosynthetic processes or used for glycolytic ATP production. The transition between the 2 forms contributes to the control of glycolysis and is important for tumor cell proliferation and survival.
Tissue specificity	Specifically expressed in proliferating cells, such as embryonic stem cells, embryonic carcinoma cells, as well as cancer cells.
Pathway	Carbohydrate degradation; glycolysis; pyruvate from D-glyceraldehyde 3-phosphate: step 5/5.
Sequence similarities	Belongs to the pyruvate kinase family.
Post-translational modifications	Phosphorylated upon DNA damage, probably by ATM or ATR. ISGylated. Under hypoxia, hydroxylated by EGLN3.
Cellular localization	Cytoplasm. Nucleus. Translocates to the nucleus in response to different apoptotic stimuli. Nuclear translocation is sufficient to induce cell death that is caspase independent, isoform-specific and independent of its enzymatic activity.

Images



Western blot - Anti-Pyruvate kinase isozyme M1 antibody (ab156849)

All lanes : Anti-Pyruvate kinase isozyme M1 antibody (ab156849) at 1 µg/ml

Lane 1 : Mouse skeletal muscle tissue lysate
Lane 2 : Mouse heart tissue lysate
Lane 3 : Mouse brain tissue lysate
Lane 4 : NIH 3T3 whole cell lysate
Lane 5 : Mouse embryonic stem cell lysate

Lysates/proteins at 10 µg per lane.

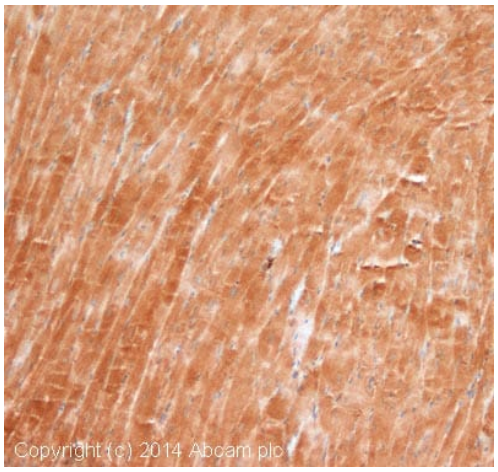
Secondary
All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/50000 dilution

Predicted band size: 58 kDa
Observed band size: 58 kDa

Exposure time: 1 minute

Gel type: MOPS

Blocking buffer: 2% BSA block



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pyruvate kinase isozyme M1 antibody (ab156849)

IHC image of Pyruvate kinase isozyme M1 staining in mouse heart formalin fixed paraffin embedded tissue section, performed on a Leica Bond system using the standard protocol B. 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 ab156849, 1µg/ml, for 15 mins at room temperature. A goat anti-rabbit biotinylated secondary antibody was used to detect the primary, and visualized using an HRP conjugated ABC system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

Western blot - Anti-Pyruvate kinase isozyme M1 antibody (ab156849)

All lanes : Anti-Pyruvate kinase isozyme M1 antibody (ab156849) at 1 µg/ml

Lane 1 : Skeletal Muscle (Mouse) Tissue Lysate
Lane 2 : Heart (Mouse) Tissue Lysate
Lane 3 : Brain (Mouse) Tissue Lysate
Lane 4 : E14Tg2a (Mouse embryonic stem cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 58 kDa
Observed band size: 58 kDa
Additional bands at: 34 kDa (possible non-specific binding), 98 kDa (possible non-specific binding)

Exposure time: 1 minute

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 5% Bovine Serum Albumin before being incubated with ab156849 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution.

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