


Product datasheet

Anti-PKM antibody ab131021

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Overview

Product name	Anti-PKM antibody
Description	Rabbit polyclonal to PKM
Host species	Rabbit
Tested applications	Suitable for: WB, IP, IHC-P
Species reactivity	Reacts with: Human Predicted to work with: Chimpanzee, Rhesus monkey, Gorilla, Orangutan 
Immunogen	Synthetic peptide corresponding to Human PKM aa 1-50. Database link: NP_002645.3
Positive control	HeLa, 293T and Jurkat whole cell lysate (ab7899).
General notes	<p>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.</p> <p>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</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C.
Storage buffer	pH: 7 Preservative: 0.09% Sodium azide Constituent: 99% Tris citrate/phosphate
Purity	pH 7 to 8 Immunogen affinity purified
Purification notes	ab131021 is affinity purified using an epitope specific to PKM2 immobilized on solid support.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab131021 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)	1/2000 - 1/10000. Predicted molecular weight: 58 kDa.
IP		Use at 2-10 µg/mg of lysate.
IHC-P		1/500 - 1/2000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

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 between 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

ISGylated.

Under hypoxia, hydroxylated by EGLN3.

Acetylation at Lys-305 is stimulated by high glucose concentration, it decreases enzyme activity and promotes its lysosomal-dependent degradation via chaperone-mediated autophagy.

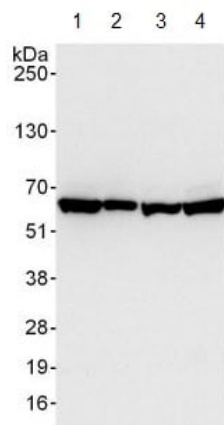
FGFR1-dependent tyrosine phosphorylation is reduced by interaction with TRIM35.

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-PKM antibody (ab131021)

All lanes : Anti-PKM antibody (ab131021) at 0.1 µg/ml

Lane 1 : HeLa whole cell lysate at 50 µg

Lane 2 : HeLa whole cell lysate at 15 µg

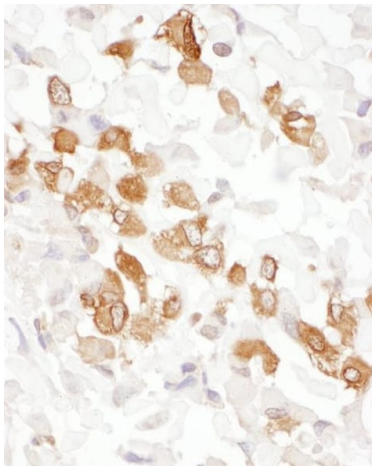
Lane 3 : 293T whole cell lysate at 50 µg

Lane 4 : Jurkat whole cell lysate at 50 µg

Developed using the ECL technique.

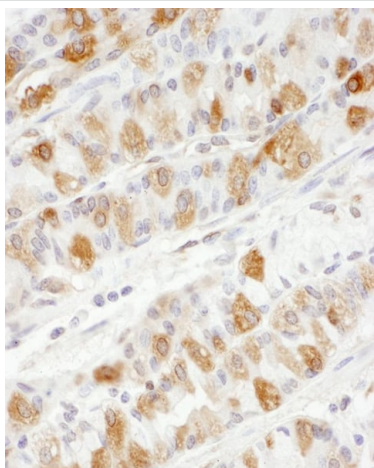
Predicted band size: 58 kDa

Exposure time: 3 seconds



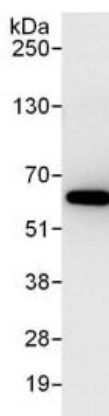
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKM antibody (ab131021)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human osteosarcoma tissue labelling PKM with ab131021 at 1/1000 (1µg/ml). Detection: DAB.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PKM antibody (ab131021)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human stomach tissue labelling PKM with ab131021 at 1/1000 (1µg/ml). Detection: DAB.



Immunoprecipitation - Anti-PKM antibody (ab131021)

Detection of PKM2 by Western Blot of Immunoprecipitate.

ab131021 at 0.4µg/ml staining PKM in HeLa whole cell lysate immunoprecipitated using ab131021 at 6µg/mg lysate (1 mg/IP; 20% of IP loaded/lane).

Detection: Chemiluminescence with exposure time of 3 seconds.

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