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PKM2 (N-term E131) Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP9076a

Specification

PKM2 (N-term E131) Antibody - Product Information

Application	**WB, IHC-P, FC,E**
Primary Accession	P14618
Other Accession	P11980, P11974, P52480
Reactivity	**Human**
Predicted	**Mouse, Rabbit, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit Ig**
Calculated MW	**57937**
Antigen Region	**116-145**

PKM2 (N-term E131) Antibody - Additional Information

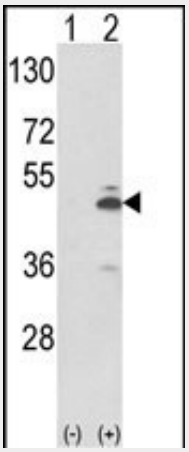
Gene ID 5315

Other Names
Pyruvate kinase PKM, Cytosolic thyroid hormone-binding protein, CTHBP, Opa-interacting protein 3, OIP-3, Pyruvate kinase 2/3, Pyruvate kinase muscle isozyme, Thyroid hormone-binding protein 1, THBP1, Tumor M2-PK, p58, PKM, OIP3, PK2, PK3, PKM2

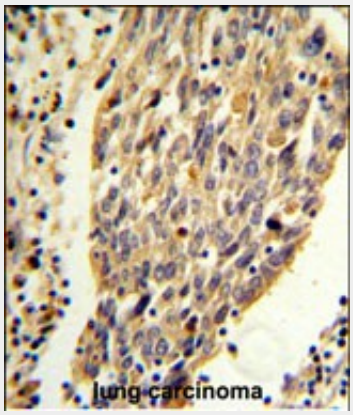
Target/Specificity
This PKM2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 116-145 amino acids from the N-terminal region of human PKM2.

Dilution
WB~~1:1000
IHC-P~~1:50~100
FC~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation



Western blot analysis of PKM2 (arrow) using rabbit polyclonal PKM2 Antibody (N-term E131) (Cat. #AP9076a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the PKM2 gene (Lane 2) .



PKM2 (N-term E131) Antibody (Cat. #AP9076a) IHC analysis in formalin fixed and paraffin embedded human lung carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the PKM2 (N-term E131) Antibody for immunohistochemistry. Clinical relevance has not been evaluated.

followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

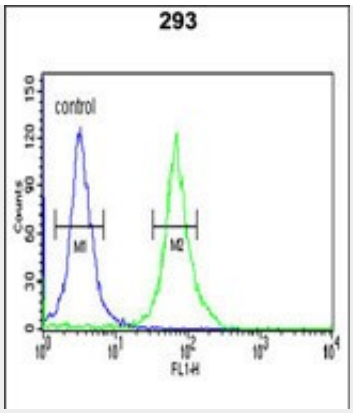
Precautions
PKM2 (N-term E131) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

PKM2 (N-term E131) Antibody - Protein Information

Name PKM

Synonyms OIP3, PK2, PK3, PKM2

Function
Glycolytic enzyme that catalyzes the transfer of a phosphoryl group from phosphoenolpyruvate (PEP) to ADP, generating ATP (PubMed:15996096, PubMed:1854723). 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 (PubMed:15996096, PubMed:1854723). The transition between the 2 forms contributes to the control of glycolysis and is important for tumor cell proliferation and survival (PubMed:15996096, PubMed:1854723). In addition to its role in glycolysis, also regulates transcription (PubMed:18191611, PubMed:<a href="http://www.uniprot.org/citations/21620138"



PKM2 (N-term E131) Antibody (Cat. #AP9076a) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

PKM2 (N-term E131) Antibody - Background

PKM2 encodes a protein involved in glycolysis. The encoded protein is a pyruvate kinase that catalyzes the transfer of a phosphoryl group from phosphoenolpyruvate to ADP, generating ATP and pyruvate. This protein has been shown to interact with thyroid hormone and may mediate cellular metabolic effects induced by thyroid hormones. This protein has been found to bind Opa protein, a bacterial outer membrane protein involved in gonococcal adherence to and invasion of human cells, suggesting a role of this protein in bacterial pathogenesis.

PKM2 (N-term E131) Antibody - References

Clower,C.V., et.al., Proc. Natl. Acad. Sci. U.S.A. 107 (5), 1894-1899 (2010)
David,C.J., et.al., Nature 463 (7279), 364-368 (2010)

target="_blank">21620138). Stimulates POU5F1-mediated transcriptional activation (PubMed:18191611). Promotes in a STAT1-dependent manner, the expression of the immune checkpoint protein CD274 in ARNTL/BMAL1-deficient macrophages (By similarity). Also acts as a translation regulator for a subset of mRNAs, independently of its pyruvate kinase activity: associates with subpools of endoplasmic reticulum-associated ribosomes, binds directly to the mRNAs translated at the endoplasmic reticulum and promotes translation of these endoplasmic reticulum-destined mRNAs (By similarity). Plays a general role in caspase independent cell death of tumor cells (PubMed:17308100).

Cellular Location
Cytoplasm. Nucleus Note=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.

Tissue Location
Specifically expressed in proliferating cells, such as embryonic stem cells, embryonic carcinoma cells, as well as cancer cells.

PKM2 (N-term E131) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture