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PKM2 Antibody (C-term L398)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7173d

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P14618
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18405
Calculated MW	57937
Antigen Region	383-417

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 383-417 amino acids from the C-terminal region of human PKM2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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 Antibody (C-term L398) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PKM
Synonyms	OIP3 {ECO:0000303|PubMed:9466265}, PK2,

Function	Catalyzes the final rate-limiting step of glycolysis by mediating the transfer of a phosphoryl group from phosphoenolpyruvate (PEP) to ADP, generating ATP (PubMed:15996096, PubMed:1854723, PubMed:20847263). 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, PubMed:20847263). 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, PubMed:20847263).
Cellular Location	[Isoform M2]: Cytoplasm. Nucleus Note=Translocates to the nucleus in response to various signals, such as EGF receptor activation or apoptotic stimuli (PubMed:17308100, PubMed:22056988, PubMed:24120661). Nuclear translocation is promoted by acetylation by EP300 (PubMed:24120661). Deacetylation by SIRT6 promotes its nuclear export in a process dependent of XPO4, thereby suppressing its ability to activate transcription and promote tumorigenesis (PubMed:26787900).
Tissue Location	[Isoform M2]: Specifically expressed in proliferating cells, such as embryonic stem cells, embryonic carcinoma cells, as well as cancer cells.

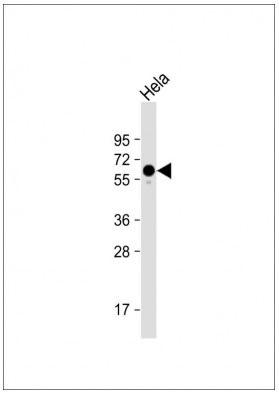
Background

PKM2 is a pyruvate kinase that catalyzes the production of phosphoenolpyruvate from pyruvate and ATP. This protein has been shown to interact with thyroid hormone, and thus 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.

References

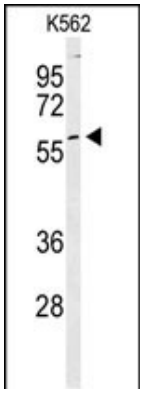
Lehner, B., et al., Genome Res. 14(7):1315-1323 (2004).
Gevaert, K., et al., Nat. Biotechnol. 21(5):566-569 (2003).
Valentini, G., et al., J. Biol. Chem. 277(26):23807-23814 (2002).
Lowrie, D.J. Jr., et al., J. Struct. Biol. 132(2):83-94 (2000).
Williams, J.M., et al., Mol. Microbiol. 27(1):171-186 (1998).

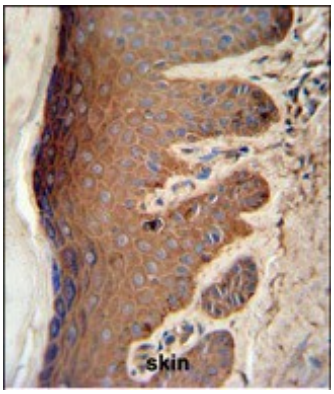
Images



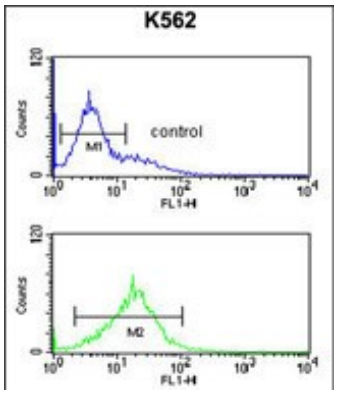
Anti-PKM2 Antibody (C-term L398) at 1:1000 dilution + Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 58 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Western blot analysis of PKM2 Antibody (C-term L398) (Cat. #AP7173d) in K562 cell line lysates (35ug/lane). PKM2 (arrow) was detected using the purified Pab.





PKM2 Antibody (C-term L398) (Cat. #AP7173d) IHC analysis in formalin fixed and paraffin embedded skin tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the PKM2 Antibody (C-term L398) for immunohistochemistry. Clinical relevance has not been evaluated.



PKM2 Antibody (C-term L398) (Cat. #AP7173d) flow cytometric analysis of K562 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.