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Product datasheet for TA326808

PKM2 (PKM) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	WB 1:500 - 1:2000;IHC 1:50 - 1:200
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Recombinant Protein of human PKM2
Formulation:	Store at -20C or -80C. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3
Concentration:	lot specific
Purification:	Affinity purification
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	58 kDa
Gene Name:	pyruvate kinase, muscle
Database Link:	NP_002645 Entrez Gene 18746 MouseEntrez Gene 25630 RatEntrez Gene 5315 Human P14618

View online »

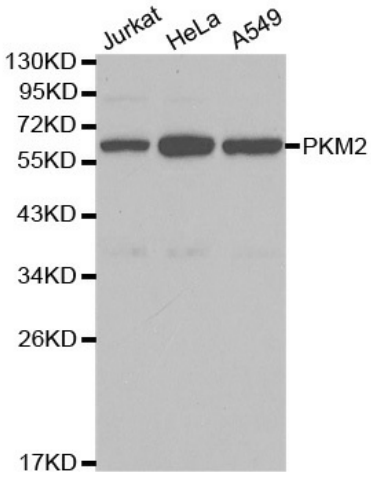
Background: Pyruvate kinase, a glycolytic enzyme, catalyses the conversion of phosphoenolpyruvate to pyruvate. In mammals, the M1 isoform (PKM1) is expressed in most adult tissues. The M2 isoform (PKM2), an alternatively-spliced variant of M1, is expressed during embryonic development. Studies found that cancer cells exclusively express PKM2. PKM2 is shown to be essential for aerobic glycolysis in tumors (Warburg effect). When the M2 isoform is switched to the M1 isoform, aerobic glycolysis is reduced and oxidative phosphorylation is increased in cancer cells. These cells also show decreased tumorigenicity in mouse xenografts. Recent studies show that the oncogenic forms of FGFR1 directly phosphorylate Tyr105 of PKM2 and thereby inhibit the formation of active tetrameric PKM2. A PKM2 mutant found in cancer cells, in which Tyr105 is replaced by phenylalanine, leads to reduced cell proliferation in hypoxia and tumor growth in xenografts in nude mice. These findings suggest that the phosphorylation at Tyr105 is a critical switch for the metabolism in cancer cells that promotes tumor growth.

Synonyms: CTHBP; HEL-S-30; OIP3; PK3; PKM2; TCB; THBP1

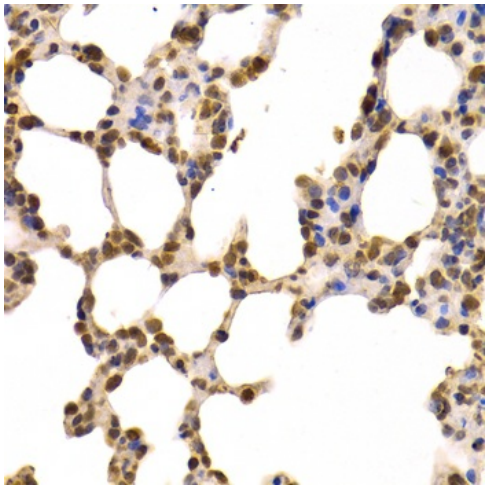
Protein Families: Druggable Genome

Protein Pathways: Glycolysis / Gluconeogenesis, Metabolic pathways, Purine metabolism, Pyruvate metabolism, Type II diabetes mellitus

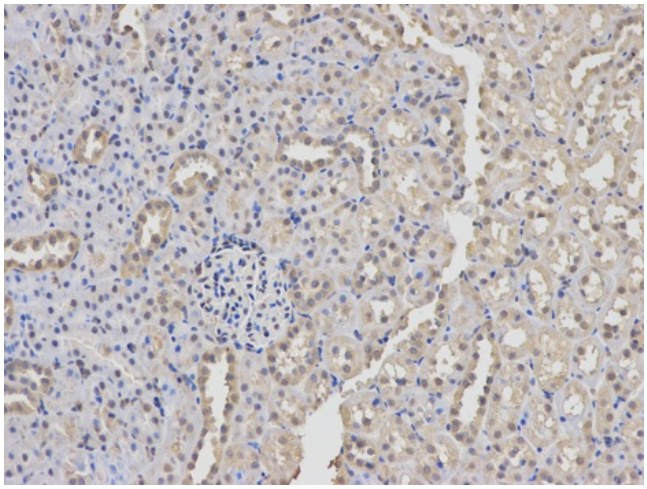
Product images:



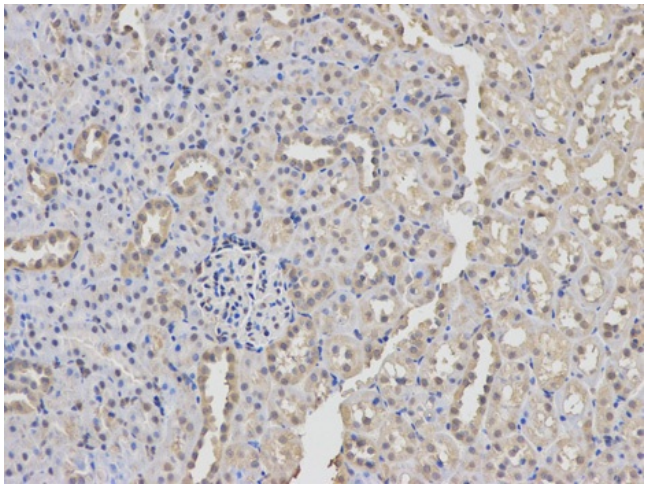
Western blot analysis of extracts of various cell lines, using PKM2 antibody.



Immunohistochemistry of paraffin-embedded rat lung using PKM antibody at dilution of 1:100 (x400 lens).



Immunohistochemistry of paraffin-embedded mouse lung using PKM2 antibody at dilution of 1:100 (400x lens).



Immunohistochemistry of paraffin-embedded rat kidney using PKM2 antibody at dilution of 1:100 (200x lens).