

Rabbit PKM2 Polyclonal Antibody | anti-PKM2 antibody

PKM2 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321895	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

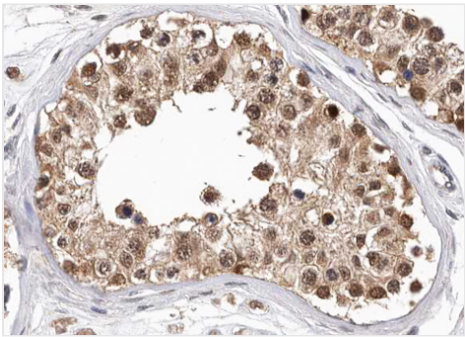
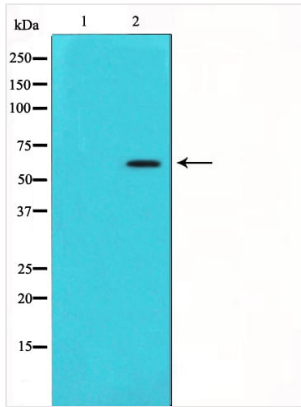
PRODUCT SYNONYMS

PKM2; Polyclonal Antibody; PKM2 Antibody; CTHBP; Cytosolic thyroid hormone binding protein; Cytosolic thyroid hormone-binding protein; KPXM_HUMAN; MGC3932; OIP 3; OIP-3; OIP3; OPA interacting protein 3; Opa-interacting protein 3; p58; PK muscle type; PK; muscle type; PK2; PK3; PKM; pykm; Pyruvate kinase 2/3; Pyruvate kinase 3; Pyruvate kinase isozymes M1/M2; Pyruvate kinase muscle; Pyruvate kinase muscle isozyme; pyruvate kinase PKM; Pyruvate kinase; muscle 2; TCB; THBP1; Thyroid hormone binding protein 1; Thyroid hormone binding protein cytosolic; Thyroid hormone-binding protein 1; Tumor M2 PK; Tumor M2-PK; anti-PKM2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	PKM2 antibody detects endogenous levels of total PKM2
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	605
Applicable Applications for anti-PKM2 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human PKM2
Subcellular Location	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.
Tissue Specificity	Specifically expressed in proliferating cells, such as embryonic stem cells, embryonic carcinoma cells, as well as cancer cells.
Predicted Cross Reactivity	Pig, Bovine, Sheep, Rabbit, Dog, Chicken, Xenopus
Similarity	Pig (92%), Bovine (100%), Sheep (100%), Rabbit (92%), Dog (100%), Chicken (92%), Xenopus (83%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohistochemistry)
AAA321895 at 1/100 staining human testis tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

WB (Western Blot)
Western blot analysis of PKM2 expression in HeLa cell lysate, The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-PKM2 antibody

Description: 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.

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.

Subunit Structure: Monomer and homotetramer. Exists as a monomer in the absence of D-fructose 1, 6-bisphosphate (FBP), and reversibly associates to form a homotetramer in the presence of FBP. The monomeric form binds T3. Tetramer formation induces pyruvate kinase activity. The tetrameric form has high affinity for the substrate and is associated within the glycolytic enzyme complex. Exists in a nearly inactive dimeric form in tumor cells and the dimeric form has less affinity for the substrate. Binding to certain oncoproteins such as HPV-16 E7 oncoprotein can trigger dimerization. FBP stimulates the formation of tetramers from dimers. Interacts with HERC1, POU5F1 and PML. Interacts (isoform M2) with EGLN3; the interaction hydroxylates PKM under hypoxia and enhances binding to HIF1A. Interacts (isoform M2) with HIF1A; the interaction is enhanced by binding of EGLN3, promoting enhanced transcription activity under hypoxia. Interacts (isoform M2, but not isoform M1) with TRIM35; this interaction prevents FGFR1-dependent tyrosine phosphorylation (PubMed:25263439).

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.

Similarity: Belongs to the pyruvate kinase family.

References
Xie X, Huang X, Tang H, Ye F, Yang L, Guo X, Tian Z, Xie X, Peng C, Xie X; Journal: Curr Cancer Drug Targets. Diallyl Disulfide Inhibits Breast Cancer Stem Cell Progression and Glucose Metabolism by Targeting CD44/PKM2/AMPK Signaling.

NCBI AND UNIPROT INFORMATION

NCBI GI #	332164775
NCBI GeneID	5315
NCBI Accession #	NP_001193725.1
NCBI GenBank Nucleotide #	NM_001206796.2

UniProt Accession #	P14618 ; P14786 ; Q53GK4 ; Q96E76 ; Q9BWB5 ; Q9UCV6 ; Q9UPF2 ; A6NFK3 ; B2R5N8 ; B3KRY0 ; B4DFX8 ; B4DUU6
Molecular Weight	Observed: 58 kDa Predicted: 58 kDa
NCBI Official Full Name	pyruvate kinase PKM isoform c
NCBI Official Synonym Full Names	pyruvate kinase M1/2
NCBI Official Symbol	PKM
NCBI Official Synonym Symbols	PK3; TCB; OIP3; PKM2; CTHBP; THBP1; HEL-S-30
NCBI Protein Information	pyruvate kinase PKM
UniProt Protein Name	Pyruvate kinase PKM
UniProt Gene Name	PKM
UniProt Synonym Gene Names	OIP3; PK2; PK3; PKM2; CTHBP; OIP-3; THBP1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/pkm2-antibody-immunohistochemistry-western-blot-elisa/321895>