

**Anti-PKM2 (RABBIT) Antibody**  
**PKM2 Antibody**  
**Catalog # ASR5583**

**Specification**

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**Anti-PKM2 (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, E, I, LCI
Application Note	This affinity purified antibody has been tested for use in western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band 56-58 kDa in size corresponding to PKM2 by western blotting in the appropriate cell lysate or extract.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	Affinity purified Anti-PKM2 antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide near the internal portion of human PKM2 protein.
Preservative	0.01% (w/v) Sodium Azide

**Anti-PKM2 (RABBIT) Antibody - Additional Information**

**Gene ID** 5315

**Other Names**  
5315

**Purity**

Anti-PKM2 is directed against human PKM2 at an internal position. This product is an affinity purified antibody produced by immunoaffinity chromatography using peptide coupled to agarose beads. A BLAST analysis was used to suggest reactivity with this protein in African frog and rat based on 100% homology and rabbit and mouse based on 93.3% homology for the immunogen sequence.

**Storage Condition**

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

**Precautions Note**

This product is for research use only and is not intended for therapeutic or diagnostic applications.

## Anti-PKM2 (RABBIT) Antibody - 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:<a href="http://www.uniprot.org/citations/15996096" target="\_blank">15996096</a>, PubMed:<a href="http://www.uniprot.org/citations/1854723" target="\_blank">1854723</a>, PubMed:<a href="http://www.uniprot.org/citations/20847263" target="\_blank">20847263</a>). 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:<a href="http://www.uniprot.org/citations/15996096" target="\_blank">15996096</a>, PubMed:<a href="http://www.uniprot.org/citations/1854723" target="\_blank">1854723</a>, PubMed:<a href="http://www.uniprot.org/citations/20847263" target="\_blank">20847263</a>). The transition between the 2 forms contributes to the control of glycolysis and is important for tumor cell proliferation and survival (PubMed:<a href="http://www.uniprot.org/citations/15996096" target="\_blank">15996096</a>, PubMed:<a href="http://www.uniprot.org/citations/1854723" target="\_blank">1854723</a>, PubMed:<a href="http://www.uniprot.org/citations/20847263" target="\_blank">20847263</a>).

### 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

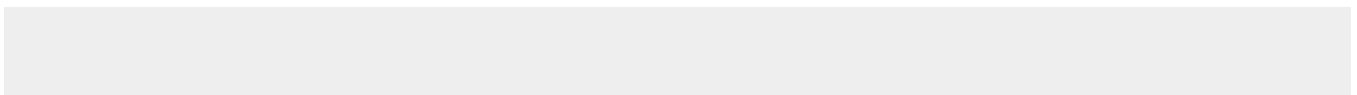
[Isoform M2]: Specifically expressed in proliferating cells, such as embryonic stem cells, embryonic carcinoma cells, as well as cancer cells.

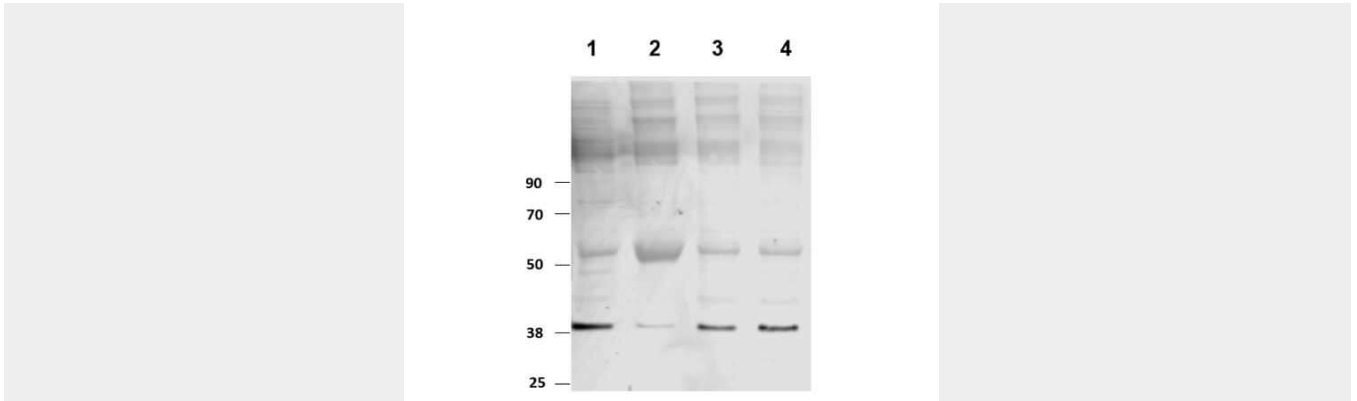
## Anti-PKM2 (RABBIT) Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Anti-PKM2 (RABBIT) Antibody - Images





Western Blot of Rabbit Anti-PKM2 antibody. Lane 1 and 2: iPSC lysate. Lane 3 and 4: myeloid lysate (iPSC derived). Load: 100  $\mu$ g per lane. Primary antibody: PKM2 antibody at 1:1000 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% Odyssey blocking buffer for 120 min at RT. Predicted/Observed size: 57 kda for PKM2. Other band(s): PKM2 splice variants and isoforms as PKM2 is a highly modified protein.

### **Anti-PKM2 (RABBIT) Antibody - Background**

Anti-PKM2 Antibody was designed, produced, and validated as part of the Joy Cappel Young Investigator Award (JCYIA). Pyruvate kinase has been shown to be expressed in tumor, embryonic and normal proliferating cells in varying levels. Studies show that when PKM2 is secreted it can induce EGFR phosphorylation which stimulates the EGFR downstream pathway. Previously PKM has been shown to be critical for aerobic glycolysis. Four isoforms of PKM play alternative roles within the system and post-translational modifications along these isoforms induce multiple pathways making this Anti-PKM2 antibody ideal for investigators involved in cancer research and post-translational modifications.