

**#13266** Store at -20°C

# PKM2 (D78A4) XP® Rabbit mAb (Sepharose® Bead Conjugate)


**Cell Signaling**  
TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IP	H M R Mk	Endogenous	60	Rabbit IgG	#P14618	5315

Product Usage Information	Application	Dilution
	Immunoprecipitation	1:20
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol. Store at -20°C. Do not aliquot the antibodies.	
<b>Specificity / Sensitivity</b>	PKM2 (D78A4) XP® Rabbit mAb detects endogenous levels of total PKM2 protein and does not cross-react with PKM1.	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of human PKM2 protein.	
<b>Product Description</b>	This Cell Signaling Technology antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated sepharose® beads. PKM2 (D78A4) XP® Rabbit mAb (Sepharose® Bead Conjugate) is useful for the immunoprecipitation of PKM2. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated PKM2 (D78A4) XP® Rabbit mAb #4053.	
MW (kDa)	60	

## Background

Pyruvate kinase is a glycolytic enzyme that catalyses the conversion of phosphoenolpyruvate to pyruvate. In mammals, the M1 isoform (PKM1) is expressed in most adult tissues (1). The M2 isoform (PKM2) is an alternatively spliced variant of M1 that is expressed during embryonic development (1). Research studies found that cancer cells exclusively express PKM2 (1-3). PKM2 is shown to be essential for aerobic glycolysis in tumors, known as the Warburg effect (1). When cancer cells switch from the M2 isoform to the M1 isoform, aerobic glycolysis is reduced and oxidative phosphorylation is increased (1). These cells also show decreased tumorigenicity in mouse xenografts (1). Recent studies showed that PKM2 is not essential for all tumor cells (4). In the tumor model studied, PKM2 was found to be active in the non-proliferative tumor cell population and inactive in the proliferative tumor cell population (4).

## Background References

1. Christofk, H.R. et al. (2008) *Nature* 452, 230-3.
2. Mazurek, S. et al. (2005) *Semin Cancer Biol* 15, 300-8.
3. Dombrauckas, J.D. et al. (2005) *Biochemistry* 44, 9417-29.
4. Israelsen, W.J. et al. (2013) *Cell* 155, 397-409.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Applications Key

**IP:** Immunoprecipitation

## Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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