Supplementary Table 1. Primary antibodies and reagents used in this study

REAGENT or RESOURCE	SOURCE	IDENTIFIER
Antibodies		
Mouse anti-PAK5	Proteintech	Cat#66961-1-lg
Rabbit anti-PAK5	Proteintech	Cat#12460-1-AP
Mouse anti-PKM2	Proteintech	Cat#60268-1-lg
Rabbit anti-PKM2	Proteintech	Cat#15822-1-AP
Mouse anti-HA	Sigma-Aldrich	Cat#H3663
Mouse anti-Flag	Sigma-Aldrich	Cat#F1804
Mouse anti-β-actin	Sigma-Aldrich	Cat#A1978
Rabbit anti-HA	Proteintech	Cat#51064-2-AP
Rabbit anti-Flag	Proteintech	Cat#20543-1-AP
Rabbit anti-β-actin	Proteintech	Cat#20536-1-AP
Mouse anti-GST	Proteintech	Cat#66001-2-Ig
Rabbit anti-GST	Proteintech	Cat#10000-0-AP
Mouse anti-His	Proteintech	Cat#66005-1-Ig
Rabbit anti-His	Proteintech	Cat#10001-0-AP
Rabbit anti-Ubiquitin	Proteintech	Cat#10201-2-AP
Mouse anti-Vimentin	Proteintech	Cat#60330-1-Ig
Rabbit anti-E-cadherin	Proteintech	Cat#20874-1-AP
Rabbit anti-Snail	Proteintech	Cat#26183-1-AP
Rabbit anti-α-SMA	Proteintech	Cat#14395-1-AP
Rabbit anti-β-catenin	Proteintech	Cat#51067-2-AP
Rabbit anti-Ubiquitin	Proteintech	Cat#10201-2-AP
Rabbit anti-pSer519 PKM2	Dia-An, Inc, in Wuhan, in China	N/A
IRDye 800CW goat anti-mouse	LI-COR	Cat#925-32210
IRDye 800CW goat anti-rabbit	LI-COR	Cat#925-32211
IRDye 680LT goat anti-mouse	LI-COR	Cat#925-68020
IRDye 680LT goat anti-rabbit	LI-COR	Cat#925-68021
Anti-HA Affinity Gel	Sigma-Aldrich	Cat#E6779
ANTI-FLAG Affinity Gel	Sigma-Aldrich	Cat#F2426
Ni-NTA Agarose	Thermo Fisher	Cat#R90101
MagnaBind™ Protein A Beads	Thermo Fisher	Cat#21348
Pierce™ Glutathione Agarose	Thermo Fisher	Cat#16100
GNE 2861	MedChemExpress	Cat#HY-12632
Leupeptin	MedChemExpress	Cat#HY-18234A
CHX	MedChemExpress	Cat# HY-12320
ATP	Cell Signaling Technology	Cat#9804

Lipofectamine 2000	Thermo Fisher	Cat#11668019
lactate assay kit	Biovision	Cat #k627-100
glucose (GO) assay kit	Sigma	Cat #GAGO20-1KT
Bacterial Strain		
E. coli DH5α	Thermo Fisher	Cat#18258012
E. coli Stable 3	Thermo Fisher	Cat#C737303
E. coli BL21	Thermo Fisher	Cat#C600003
Mouse: C57BL/6J-PAK5 $^{+/-}$	Cyagen Biosciences, Inc.	N/A
Experimental Models: Cell Lines		
Human: 293T cells	Cell Bank of the Chinese Academy of	Cat#GNHu17
Recombinant DNA		
pCDNA3.0/neo-HA-PAK5	This paper	N/A
pCDNA3.1/neo-Flag-PAK5	This paper	N/A
pCDNA3.0/neo-HA-PKM2	This paper	N/A
pCDNA3.1/neo-Flag-PKM2	This paper	N/A
pcDNA3.1/neo-HA-PKM2 S6A	This paper	N/A
pcDNA3.1/neo-HA-PKM2 S182A	This paper	N/A
pcDNA3.1/neo-HA-PKM2 S249A	This paper	N/A
pcDNA3.1/neo-HA-PKM2 S519A	This paper	N/A
pcDNA3.1/neo-HA-PKM2 S519D	This paper	N/A
pLVX-IRES-neo-HA-PKM2 (WT or mutants)	This paper	N/A
PET28a-His-PAK5	This paper	N/A
PET28a-His-PKM2	This paper	N/A
pLVX-IRES-neo-Flag-PAK5	This paper	N/A
pLVX-shRNA-PAK5	This paper	N/A
pLVX-shRNA-PKM2	This paper	N/A

Supplementary Table 2. Primer sequences used for DNA constructs

shRNA-PAK5-1	Fw: 5’ -GGGAATACTTGGCCAACTTTA-3’
shRNA-PAK5-2	Fw: 5’ -GACAAGCGATGGCCGGATAAA-3’
shRNA-PKM2	Fw: 5’ -CAACGCTTGTAGAACTCACTC-3’
shRNA-NC	Fw: 5' -TTCTCCGAACGGTCACGT-3’

Supplementary Table 3. siRNA and PCR primer sequences

siRNA sequences	
Negative control	Fw: 5’-UUCUCCGAACGUGUCACGUTT-3’
	Rev: 5’-ACGUGACACGUUCGGAGAATT-3’
si-PKM2	Fw: 5′-CCAUAAUCGUCCUCACCAATT-3′
	Rev: 5’-UUGGUGAGGACGAUUAUGGTT-3’
qRT-PCR primers	
PKM2	Fw: 5'-ACTCGGGCTGAAGGCAGTGA-3’ Rev: 5'-TGTGGGGTCGCTGGTAATGG-3’
PAK5	Fw: 5'-CACATTTGGACTCACTGAGC-3’ Rev: 5'-TTCACTGTACGCCAGGCTCT-3’
E-cadherin	Fw: 5’-GACAACAAGCCCGAATT-3’ Rev: 5’-GGAAACTCTCTCGGTCCA -3’
Vimentin	Fw: 5’-GAGAACTTTGCCGTTGAAGC-3’ Rev: 5’-GCTTCCTGTAGGTGGCAATC-3’
α-SMA	Fw: 5’-AGACATCAGGGGGTGATGGT-3’ Rev: 5’-CATGGCTGGGACATTGAAAG-3’
Snail	Fw: 5’-GCAAATACTGCAACAAGG-3’ Rev: 5’-GCACTGGTACTTCTTGACA-3’
β-catenin	Fw: 5’-ATGGCTACTCAAGCTGATTT-3’ Rev: 5’-TCCCACTCATACAGGACTTG-3’
18S	Fw: 5’-GTTGAACCCCATTCGTGATG-3’ Rev: 5’-GCCTCACTAAACCATCCAA-3’
β-actin	Fw: 5’-ATGGATGACGATATCGCTGCGC-3’ Rev: 5’-GCAGCACAGGGTGCTCCTCA-3’