

Figure S1. Relative protein expression of western blot results. (A) Average grayscale values of western blot results in Fig. 1D. (B) Average grayscale values of western blot results in Fig. 2A. (C) Average grayscale values of western blot results in Fig. 5D. *P<0.05 vs. NHA, NC-Overex or NC-Ko. NC, negative control; overex, overexpression; Ko, knockout.

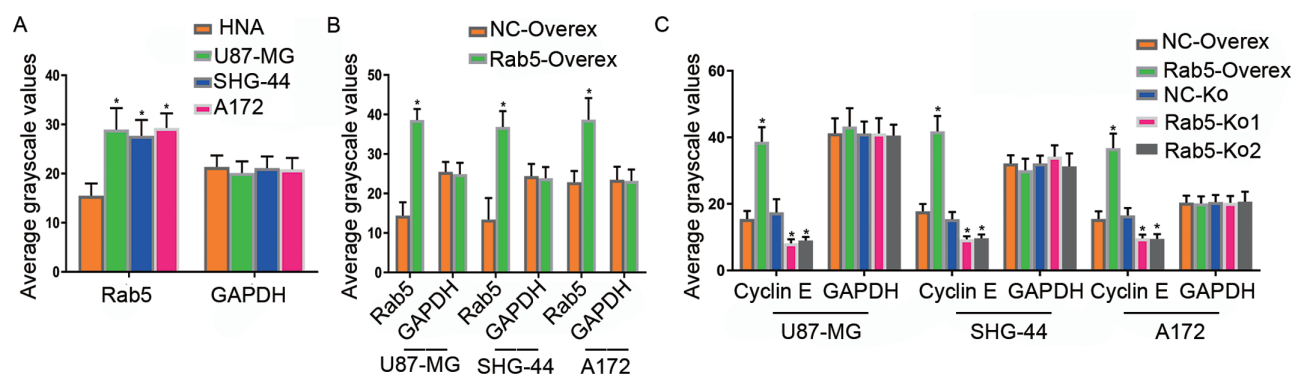


Table SI. Clinicopathological features of 30 patients with glioma.

Characteristics	Rab 5 expression ^a		P-value
	Low ^b	High ^c	
Sex			0.712
Male	6	7	
Female	9	8	
Age, years			0.715
<55	7	8	
≥55	8	7	
T-stage			0.020
T1-2	8	2	
T3-4	7	13	
N stage			0.009
N0	10	3	
N1/2	5	12	
Lymphatic metastasis			<0.001
Negative	12	2	
Positive	3	13	

^aCut-off = median Rab5 expression. ^bClassified in 30 patients with expression values <50th percentile. ^cClassified in 30 patients with expression values >50th percentile.

Table SII. Sequences of sgRNAs and primers.

Gene	Sequence type	Sequence (5'→3')
Rab5	Forward	AGACCCAACGGGCCAAATAC
	Reverse	GCCCCAATGGTACTCTCTTGAA
Rab5 sgRNA1	HGLibA_39960-f	caccGTTACTACAACACTGATTCC
	HGLibA_39960-r	aaacGGAATCAGTGTTGTAGTAAC
Rab5 sgRNA2	HGLibA_39962-f	caccGTTACTACAACACTGATTCC
	HGLibA_39962-r	aaacGGAATCAGTGTTGTAGTAAC
Control sgRNA	HGLibA_65368-f	caccAAGAAGAATTGGGGATGATG
	HGLibA_65368-r	aaacCATCATCCCCAATTCTTCTT
CDK1	Forward	AAACTACAGGTCAAGTGGTAGCC
	Reverse	TCCTGCATAAGCACATCCTGA
CDK2	Forward	ATGTCTTACAAACCGAACTTGGC
	Reverse	GCCCCGTAGTCACTGAGCAG
CDK4	Forward	ATGGCTACCTCTCGATATGAGC
	Reverse	CATTGGGGACTCTCACACTCT
CDK6	Forward	GCTGACCAGCAGTACGAATG
	Reverse	GCACACATCAAACAACCTGACC
Cyclin A	Forward	GAGGTCCCGATGCTTGTCTAG
	Reverse	GTTAGCAGCCCTAGCACTGTC
Cyclin B	Forward	AATAAGGCGAAGATCAACATGGC
	Reverse	TTTGTTACCAATGTCCCCAAGAG
Cyclin D	Forward	GCTGCGAAGTGGAACCATC
	Reverse	CCTCCTTCTGCACACATTTGAA
Cyclin E	Forward	AAGGAGCGGGACACCATGA
	Reverse	ACGGTCACGTTTGCCTTCC

sgRNA, single guide RNA; CDK, cyclin-dependent kinase.

Table SIII. Average grayscale values of western blot results in Fig. 1D.

Protein	HNA	U87-MG	SHG-44	A172	F value	P-value
Rab5	15.485±2.483	28.958±4.372	27.694±3.221	29.271±2.965	19.68	<0.001
GAPDH	21.343±2.345	20.123±2.345	21.129±2.345	20.849±2.345	0.35	0.788

Table SIV. Average grayscale values of western blot results in Fig. 2A.

Group	U87-MG		SHG-44		A172	
	Rab5	GAPDH	Rab5	GAPDH	Rab5	GAPDH
NC-Overex	14.385±3.382	25.483±2.483	13.385±5.483	24.379±3.111	22.837±2.845	23.465±3.325
Rab5-Overex	38.594±2.784	24.895±2.855	36.857±3.977	23.847±2.843	38.689±5.443	23.194±2.885
t value	12.3578	0.3475	7.7486	0.2823	5.7714	0.3478
P-value	0.0000	0.7372	0.0001	0.7849	0.0004	0.7543

Table SV. Average grayscale values of western blot results in Fig. 5D.

Group	U87-MG		SHG-44		A172	
	Cyclin E	GAPDH	Cyclin E	GAPDH	Cyclin E	GAPDH
NC-Overex	15.485±2.385	41.234±4.483	17.796±2.184	32.184±2.418	15.483±2.291	20.373±2.116
Rab5-Overex	38.697±4.385	43.284±5.482	41.838±4.594	30.111±3.485	36.779±4.332	20.184±2.114
NC-Kd	17.486±3.956	41.194±3.596	15.449±2.119	32.182±2.334	16.558±2.194	20.586±2.110
Rab5-Kd1	8.183±1.184	41.188±4.596	9.375±0.893	34.221±3.392	9.665±1.111	20.340±2.048
Rab5-Kd2	9.022±1.032	40.598±3.209	9.655±1.173	31.295±3.885	9.481±1.430	20.694±2.984
F value	88.84	0.28	137.42	1.13	97.77	0.04
P-value	<0.0001	0.8864	<0.0001	0.3696	<0.0001	0.9968