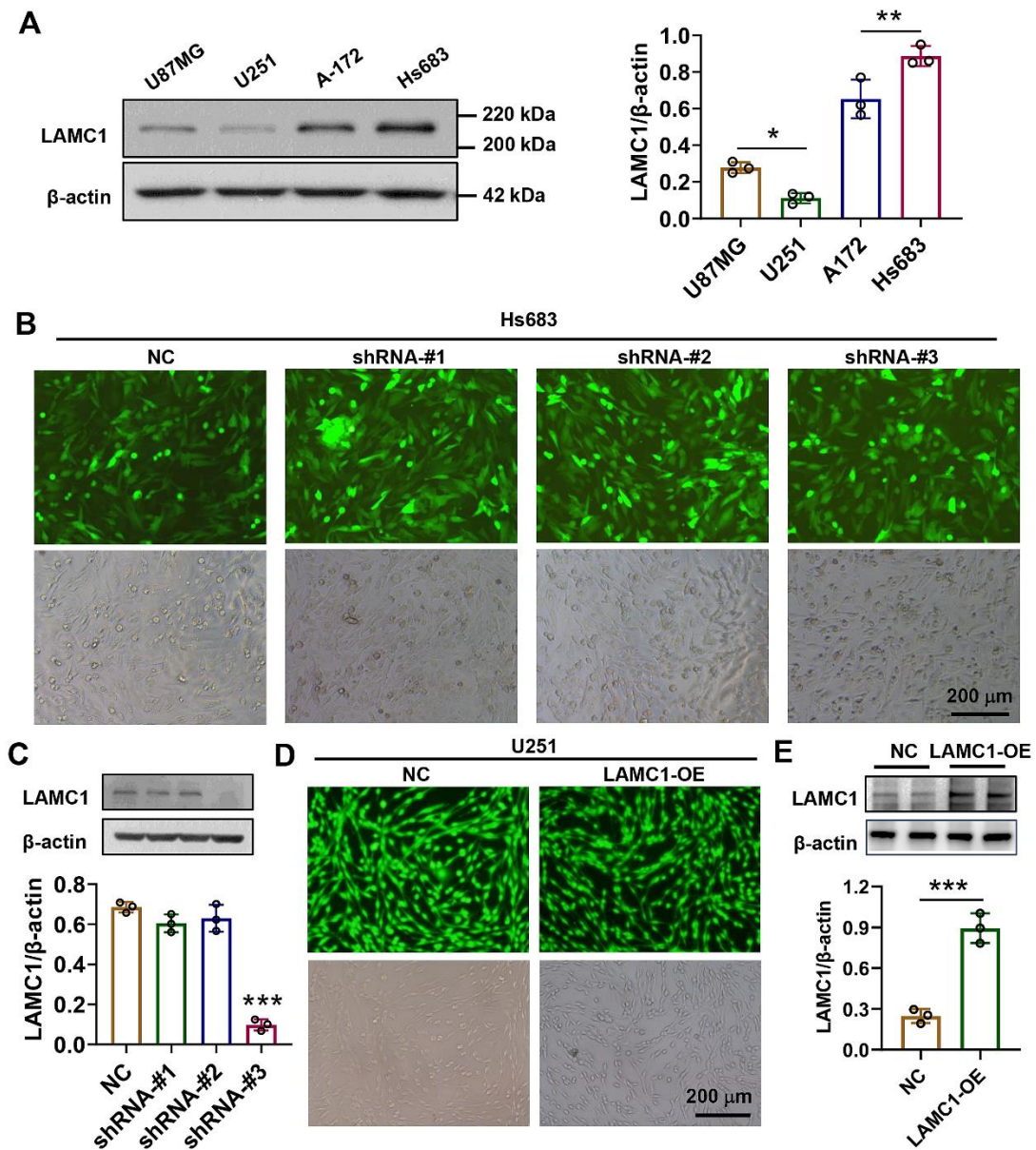
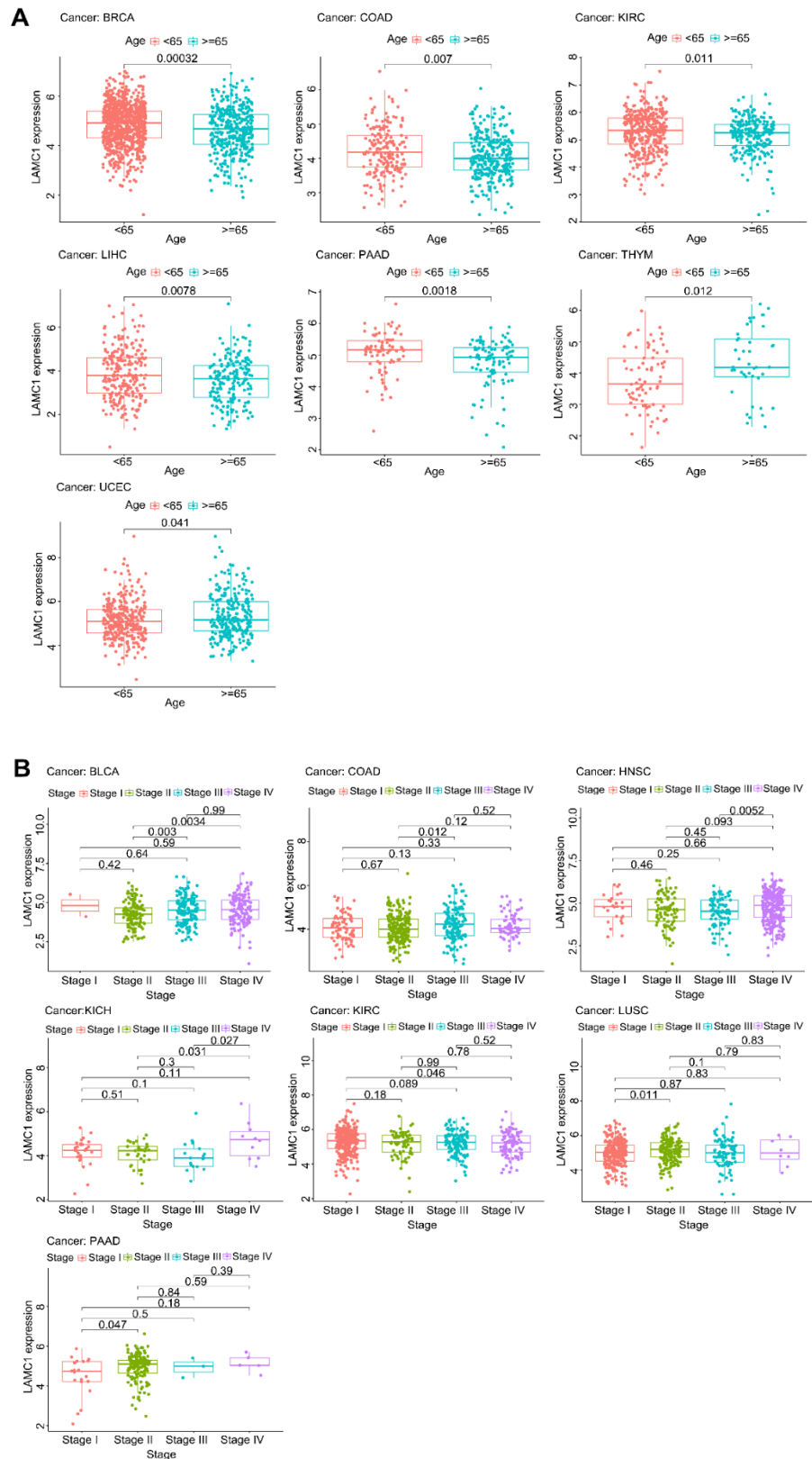


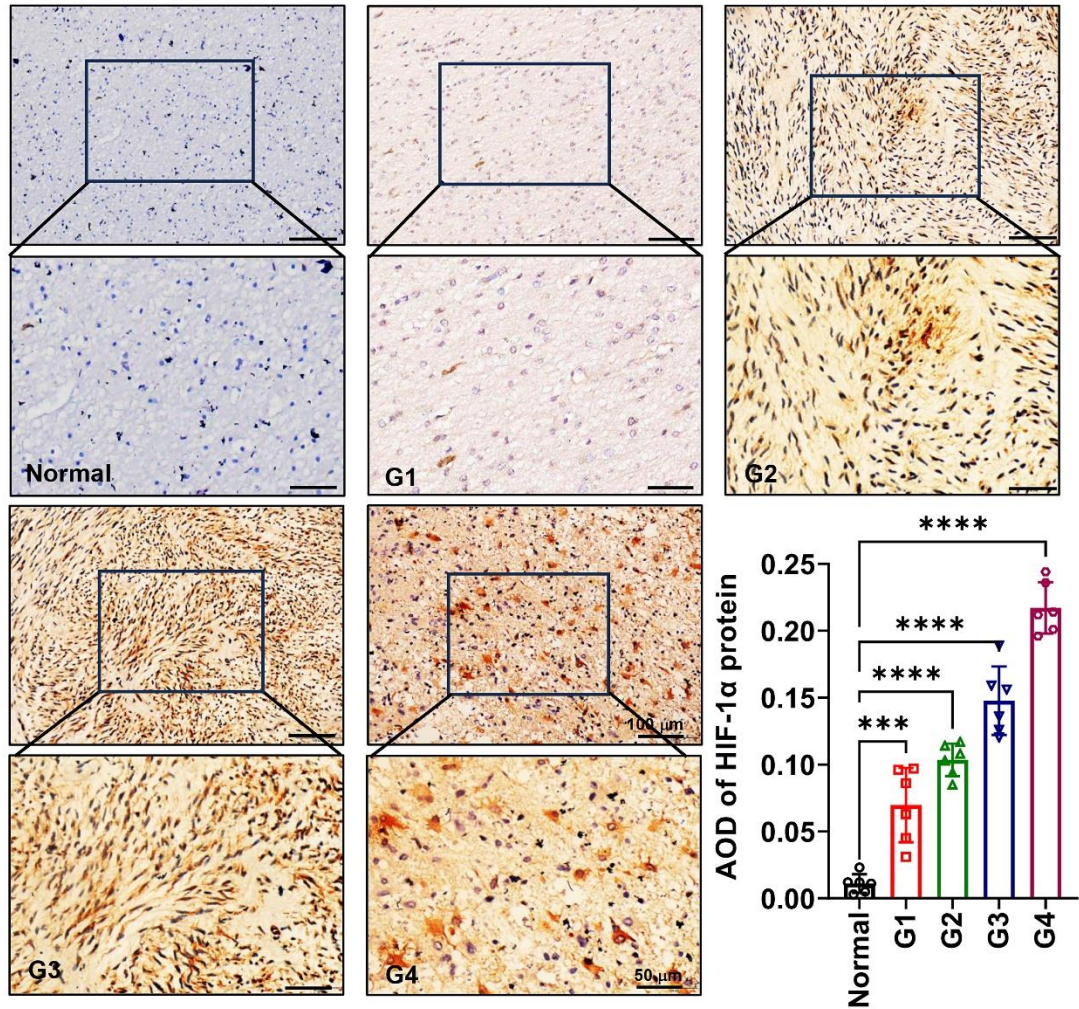
Additional file 1



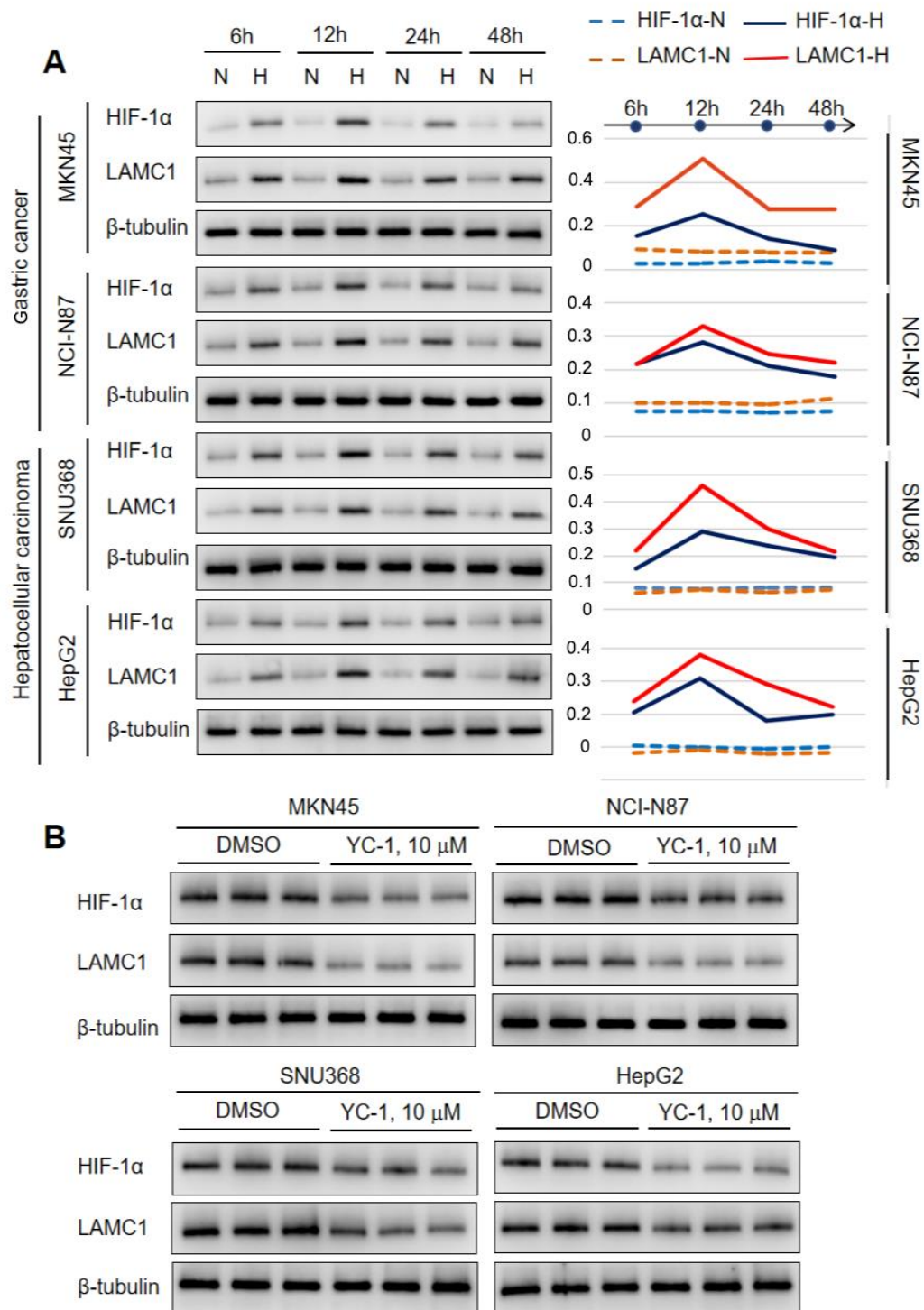
**Figure S1. Screening and targeted intervention of glioma cell lines with differential expression of LAMC1.** (A) LAMC1 protein expression in glioma cell lines detected by western blotting.  $*P < 0.05$ ,  $**P < 0.01$ . (B) Observation of the lentivirus infection effects in Hs683 cells under microscopes. (C) Western blot was used to detect the inhibitory effects of different RNAi targets on LAMC1 expression,  $***P < 0.001$  vs NC. (D) Observation of the lentivirus infection effects in U251 cells under microscopes. (E) Western blot was used to detect the LAMC1 expression in U251 cell line post viral infection,  $***P < 0.001$ .



**Figure S2. Correlation analysis of *LAMC1* expression and clinicopathological features. (A) Age. (B) Stage.**



**Figure S3. Immunohistochemical detection of HIF-1 $\alpha$  protein expression in clinical gliomas and control tissues.** Total 15 sections of clinical samples (normal, n=3; glioma G1, n=3; glioma G2, n=3; glioma G3, n=3 and glioma G4, n=3) from Shanghai Outdo Biotech were used for immunohistochemical staining of HIF-1 $\alpha$ . Mouse anti human HIF-1 $\alpha$  antibody (Cat: #PTM-5851, PTMBIO, Hangzhou, China) and PV-8000 staining kit (ZSGF-BIO, Beijing) were used. The positive expression signal of HIF-1 $\alpha$  protein is located in the nucleus and cytoplasm. Expression levels of HIF-1 $\alpha$  was quantified using the average optical density (AOD) values, and each section adopts 2 typical views. Bars = 100  $\mu$ m or 50  $\mu$ m. \*\*\* $P$ <0.01, \*\*\*\* $P$ <0.0001.



**Figure S4. Expression and regulation of HIF-1 $\alpha$  and LAMC1 in gastric cancer and liver cancer cells.** (A) LAMC1 and HIF-1 $\alpha$  protein expression in gastric and liver cancer cells under normoxia (N) and hypoxia (H) conditions. (B) HIF-1 $\alpha$  inhibitor YC-1 inhibited LAMC1 and HIF-1 $\alpha$  protein expression in gastric and liver cancer cells after 12 h of hypoxia.

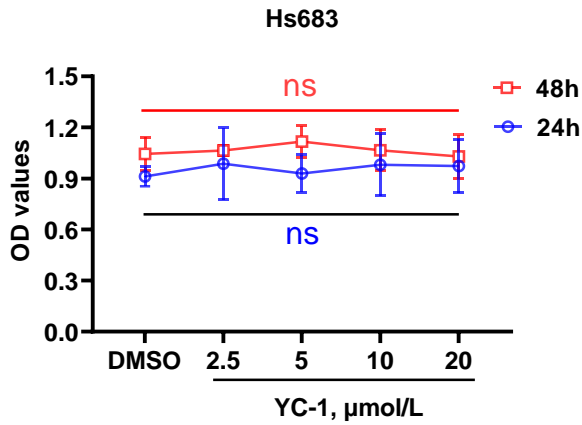


Figure S5. The effect of different concentrations of YC-1 on the viability of Hs683 cells detected by CCK-8 assay. Ns, none significance.

Table S1.

The relation of LAMC1 expression to the clinicopathological features in glioma.

Items		High LAMC1 expression(n=120)	Low LAMC1 expression(n=30)	$\chi^2$	P-value
Gender	female	43	10	0.066	0.798
	male	77	20		
Age(years)	$\leq 39$	44	14	1.012	0.314
	$> 39$	76	16		
Grade	I-II	68	24	5.510	0.019
	III-IV	52	6		
Postoperative recurrence	No	46	21	9.737	0.002
	Yes	74	9		

Table S2.

Univariate and multivariate analysis of the relationship between LAMC1 expression and overall survival in glioma patients.

Risk factor	Univariate analysis			Multivariate analysis		
	HR	95% CI	P-value	HR	95% CI	P-value
Gender(M/F)	1.559	0.859-2.828	0.144	1.905	1.024-3.545	0.042
Age( $> 39/ \leq 39$ , years)	3.907	1.908-8.000	0.000	3.964	1.890-8.314	0.000
Grade (I-II/III-IV)	17.821	8.327-38.139	0.000	18.057	8.240-39.573	0.000
Recurrence (Yes/No)	1.460	0.841-2.537	0.179	1.020	0.570-1.824	0.947
LAMC1(High/Low)	2.292	0.980-5.356	0.056	1.138	0.477-2.713	0.770

HR: hazard ratio, CI: confidence interval