

*Supplementary Materials*

# **Integrative Analysis of the Predictive Value of Perilipin Family on Clinical Significance, Prognosis and Immunotherapy of Glioma**

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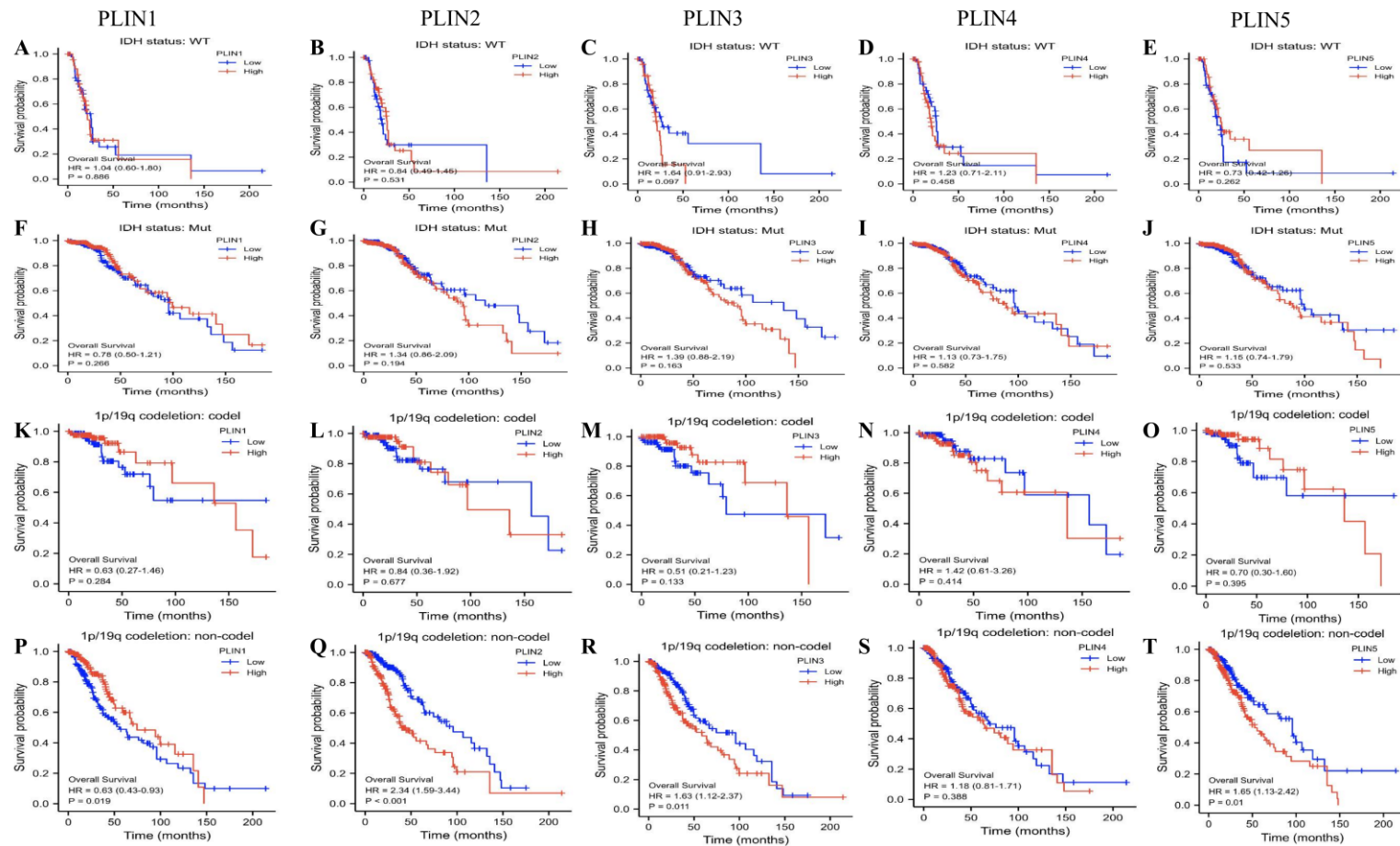
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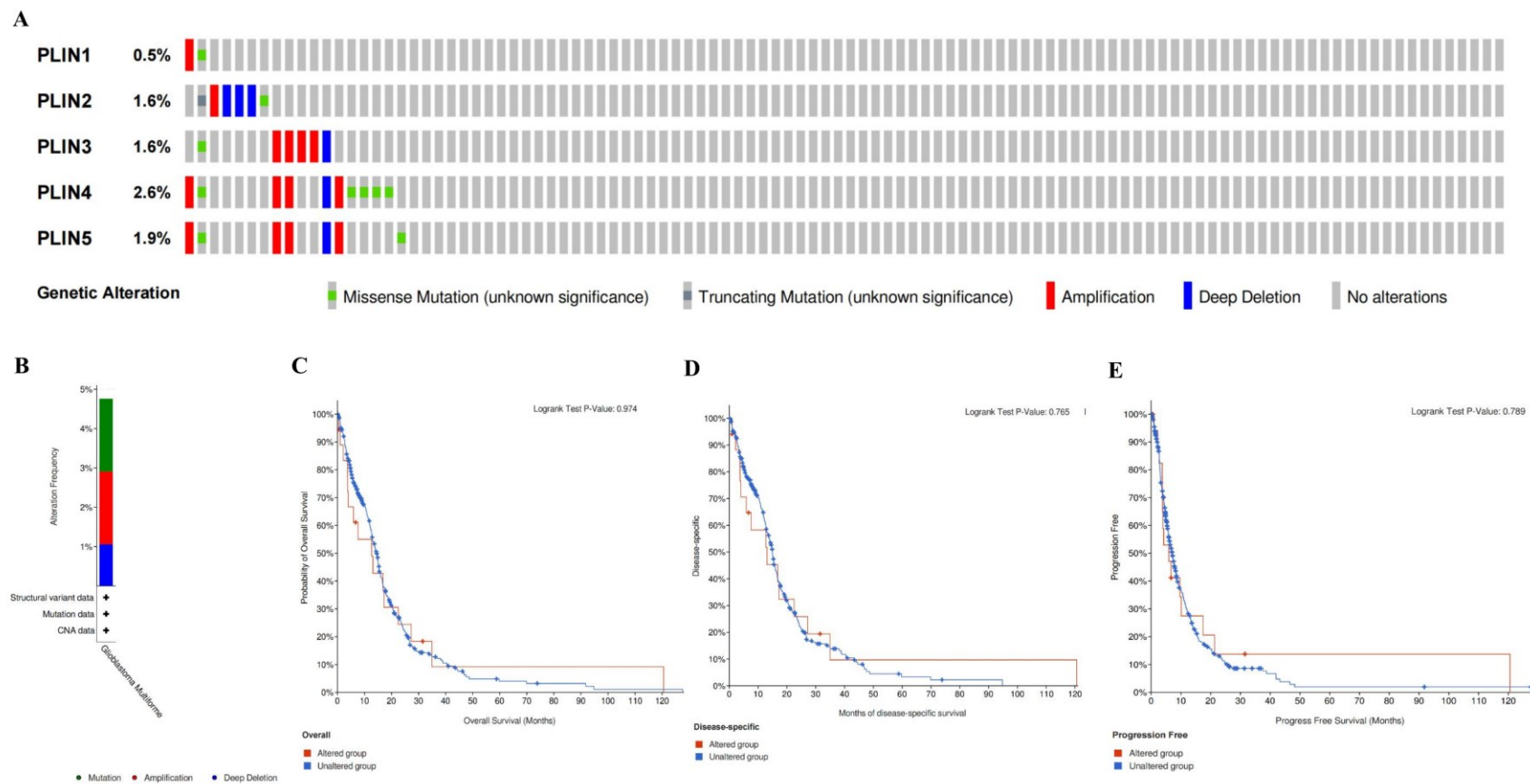
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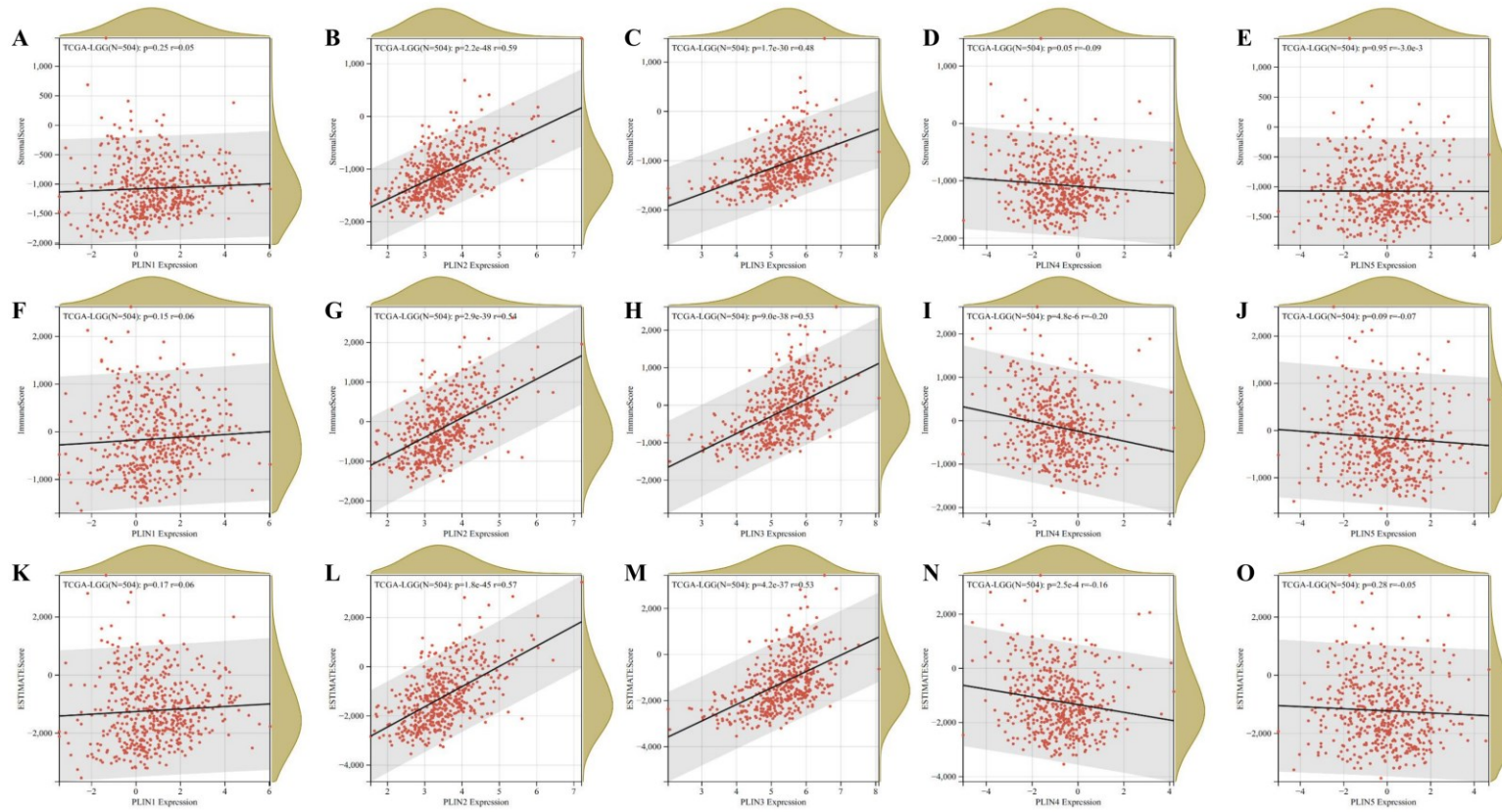
† These authors contributed equally to this work.



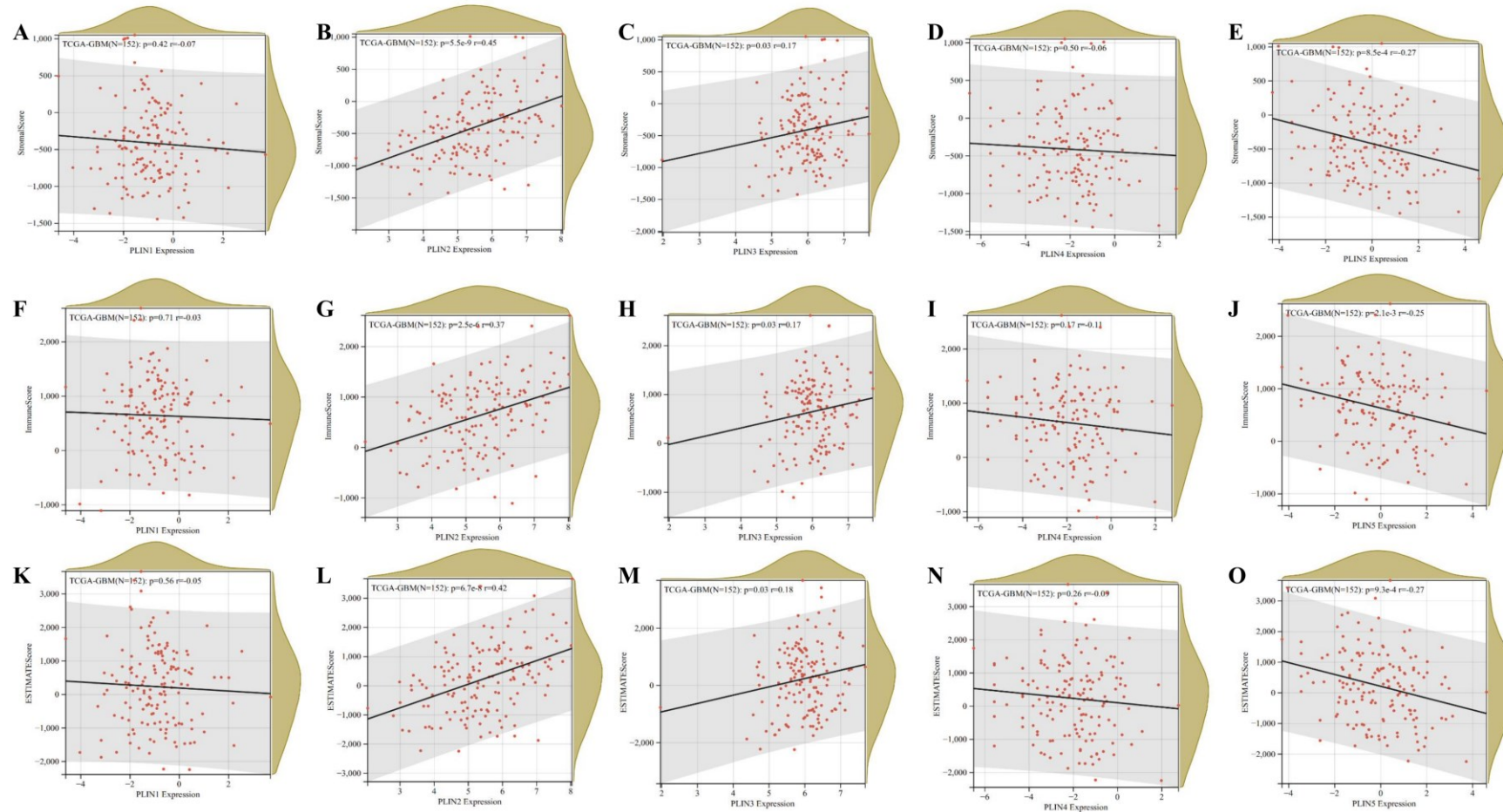
**Figure S1. Prognostic analysis of *PLINs* family in different subgroups of LGG. (A-J) Overall survival analysis of *PLIN1-5* mRNA expression in LGG IDH mutant and wild type. (K-T) Overall survival analysis of *PLIN1-5* mRNA expression in LGG 1p/19q coding and non-coding.**



**Figure S2. Genetic alterations of the *PLINs* family in GBM.**(A-B) Frequency and type of genetic alterations of *PLINs* in GBM. (C-E) Prognostic analysis of genetically altered and non-altered groups of *PLINs* families in GBM.

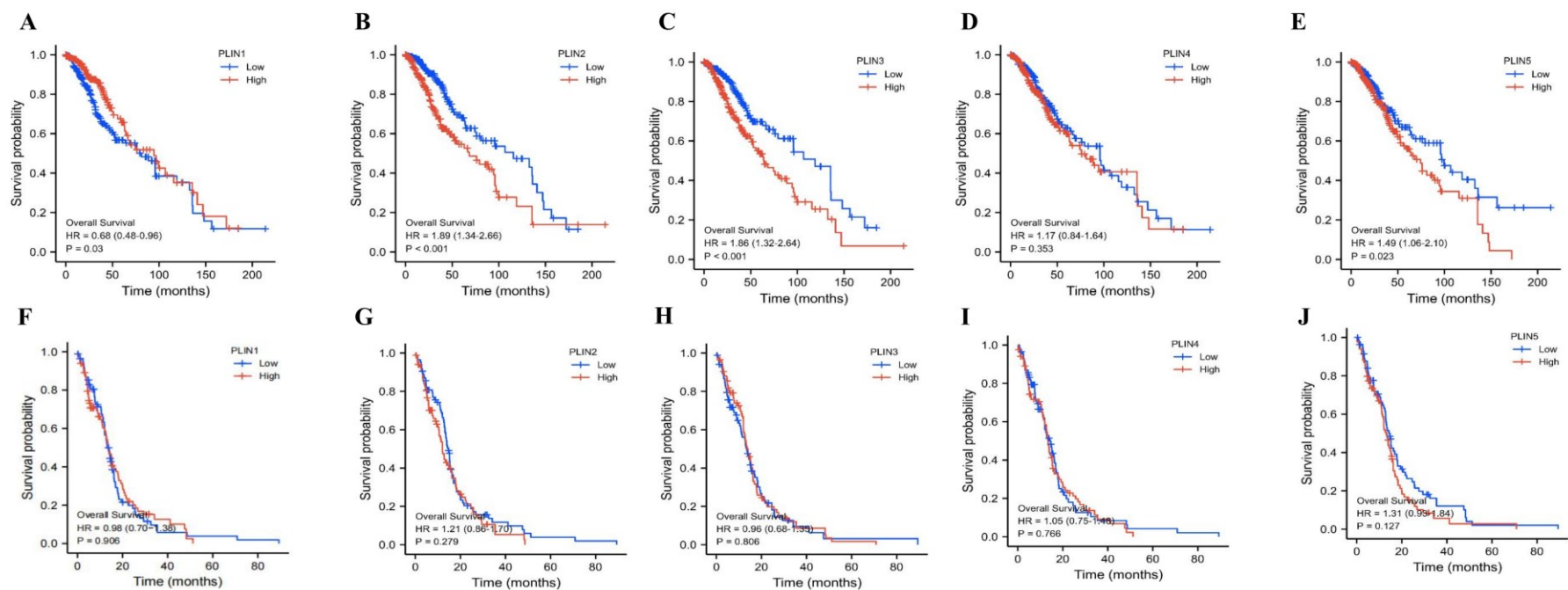


**Figure S3. Immune infiltration score of *PLIN*s family in LGG.** (A) Correlation of *PLIN*1-5 expression with stromal scores in LGG. (B) Correlation of *PLIN*1-5 expression with immune scores in LGG. (C) Correlation of *PLIN*1-5 expression with ESTIMATE scores in LGG.

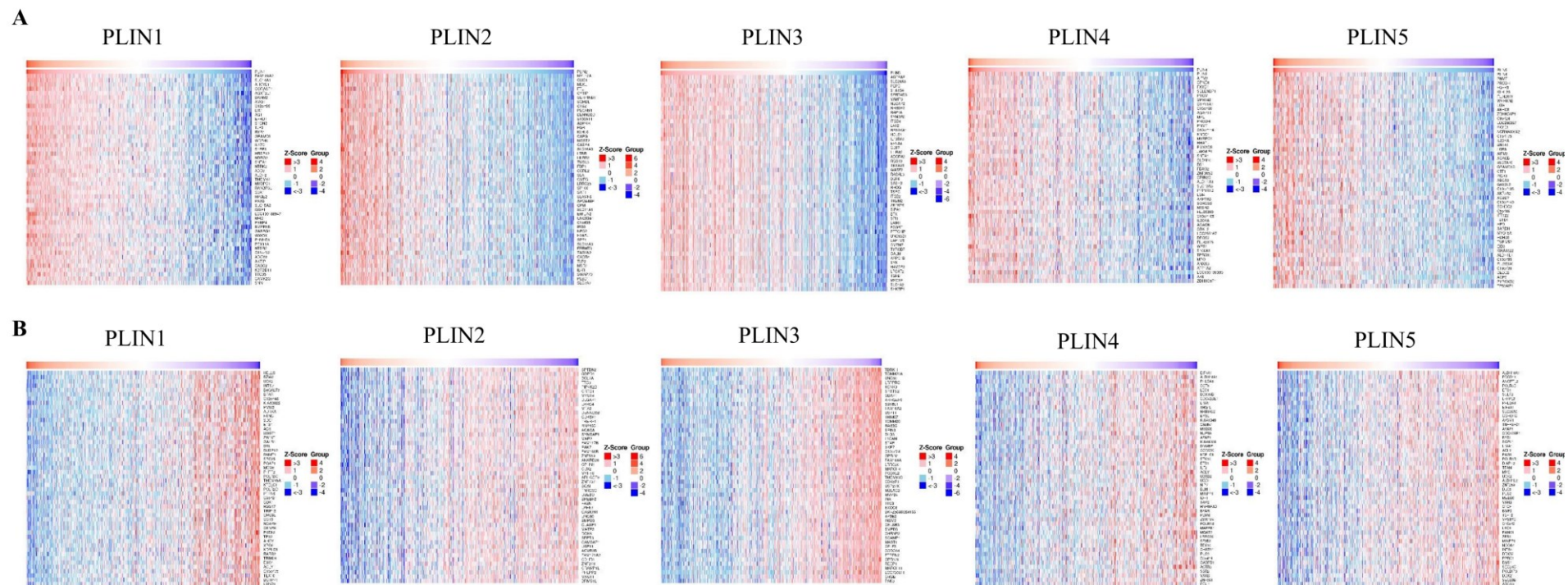


**Figure S4. Immune infiltration score of *PLINs* family in GBM.**(A) Correlation of *PLIN1-5* expression with stromal scores in GBM. (B) Correlation of *PLIN1-5* expression with immune scores in GBM. (C) Correlation of *PLIN1-5* expression with ESTIMATE scores in GBM.





**Figure S5. Correlations between *PLINs* expression and drug sensitivity from Cellminer database.** (A-C) The expression of *PLIN1* was negatively correlated with the drug sensitivity of Trametinib, AEE-788 and Adavosertib. (D-E) The relationship between *PLIN2* and drug reactivity of Dabrafenib and Selumetinib. (F) The correlation between *PLIN3* and drug reactivity of Telatinib. (G) The correlation between *PLIN4* and drug reactivity of Trametinib. (H) The correlation between *PLIN5* and drug reactivity of Linsitinib.



**Figure S6. Heat map of *PLINs* family gene-related genes in LGG patients. (A) Top 50 genes positively associated with *PLINs* family genes. (B) Top 50 genes negatively associated with *PLINs* family genes.**

**Table S1.** Clinicopathological characteristics of patients from TCGA cohort.

Characteristics	Category	Number of cases	(%)
Age, median (IQR)	45 (34, 59)		
Gender			
	Male	401	57.4
	Female	298	42.6
Histological type			
	Astrocytoma	196	28.0
	Oligoastrocytoma	135	19.3
	Oligodendroglioma	200	28.6
	Glioblastoma	168	24
WHO grade			
	G2	224	35.2
	G3	245	38.5
	G4	168	26.4

**Table S2.** Clinicopathological characteristics of patients from CGGA cohort.

Characteristics	Category	Number of cases	(%)
Age, median (IQR)	42 (35, 51)		
Gender			
	Male	601	59.0
	Female	417	41.0
Histological type			
	Astrocytoma	175	17.2
	Oligoastrocytoma	9	0.9
	Oligodendroglioma	112	11.0
	Anaplastic oligodendroglioma	94	9.2
	Anaplastic oligoastrocytoma	21	2.1
	Anaplastic astrocytoma	214	21.0
	Glioblastoma	388	38.1
	Unknown	5	0.5
WHO grade			
	G2	291	28.6
	G3	334	32.8
	G4	388	38.1