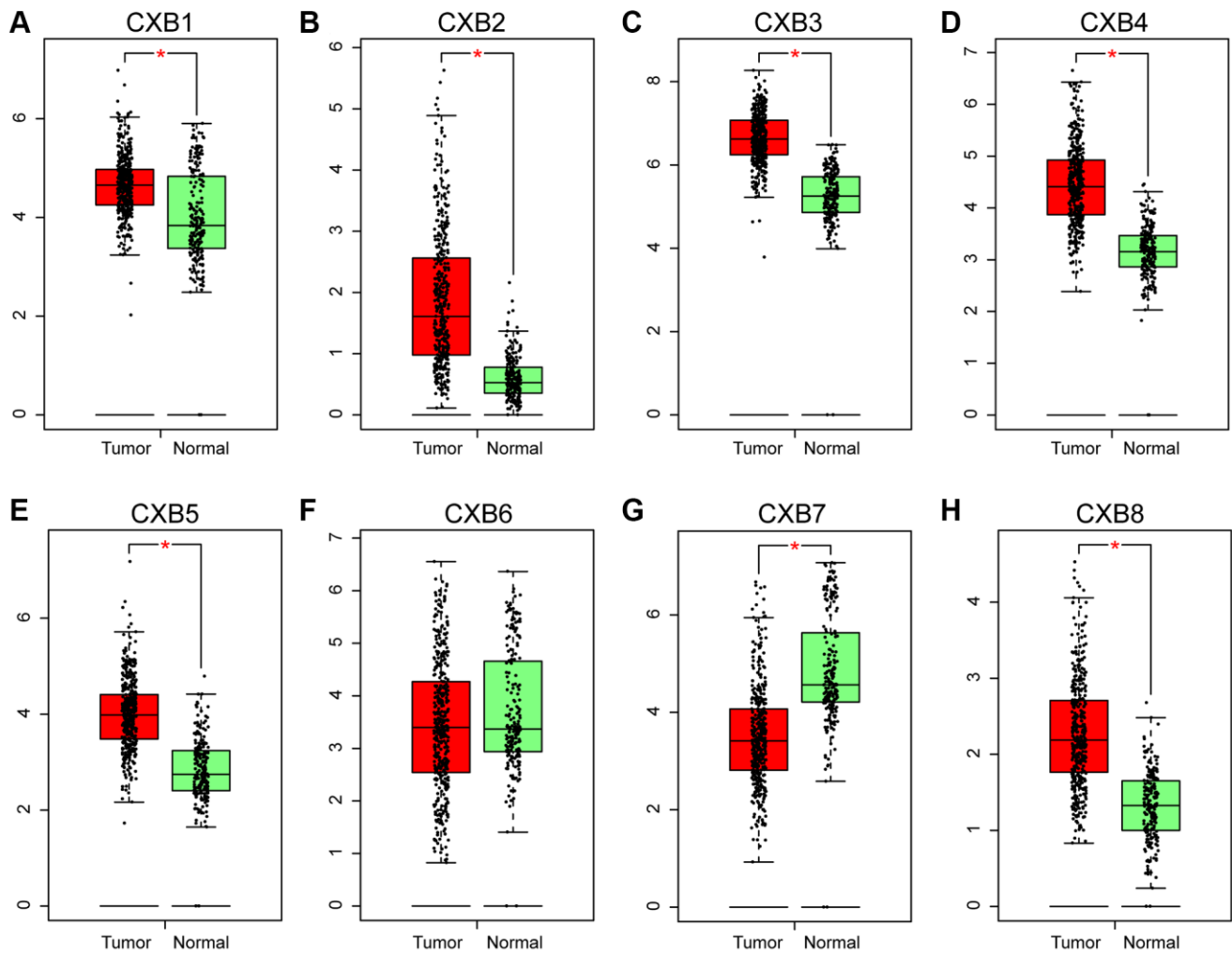


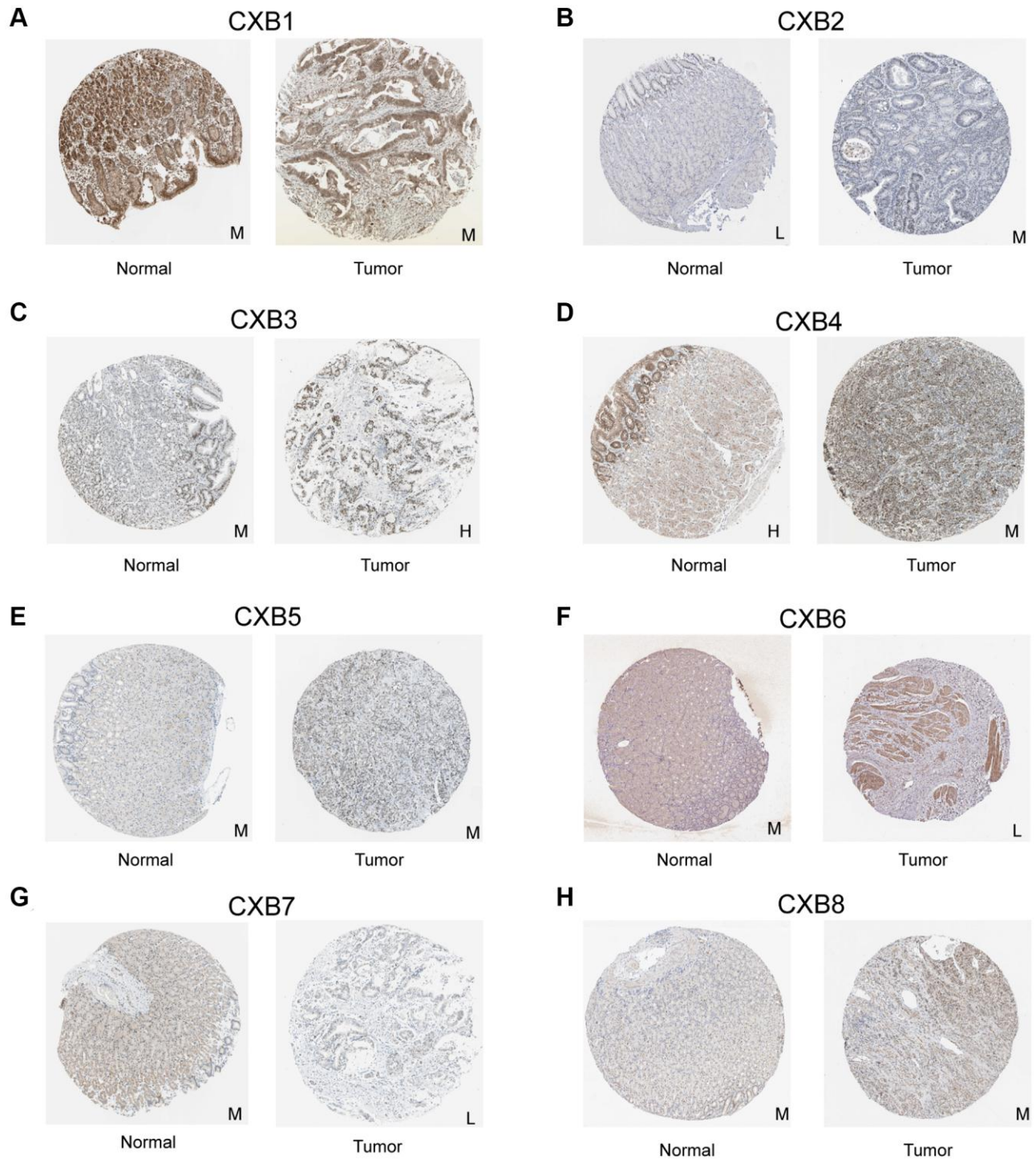
SUPPLEMENTARY FIGURES

	CBX1	CBX2	CBX3	CBX4	CBX5	CBX6	CBX7	CBX8
Analysis Type by Cancer	Cancer vs. Normal	Cancer vs. Normal	Cancer vs. Normal	Cancer vs. Normal	Cancer vs. Normal	Cancer vs. Normal	Cancer vs. Normal	Cancer vs. Normal
Bladder Cancer	2	2	2	1		1		
Brain and CNS Cancer	2	2 1	11	1	5 1	11	1 8	1
Breast Cancer	1	6 1	15	6	2	2	1 17	4
Cervical Cancer	1	1	4		4		1	
Colorectal Cancer	6	10	24	18	10	4	12	6
Esophageal Cancer	2 1		4			1	1	
Gastric Cancer	5	3	4	6		1	1	
Head and Neck Cancer	4 1	2	13		2		1	
Kidney Cancer			7	1			1	1
Leukemia	1 3	5	1 1	2	3 4	3	1 7	
Liver Cancer	4		2		1		1	
Lung Cancer	9	3	11	2	5	1	7	
Lymphoma	1	1	3 1		5 2	4 1		
Melanoma			3				1	
Myeloma			1					1
Other Cancer	3 1	3	4	2	5 1		3	1
Ovarian Cancer			2			1	5	
Pancreatic Cancer	1		1		2			
Prostate Cancer			3	4		1	2	
Sarcoma	8		9	1	6	2	7	
Significant Unique Analyses	49 7	37 3	123 1	42 7	50 11	8 24	3 77	13 1
Total Unique Analyses	348	273	361	327	357	298	257	243

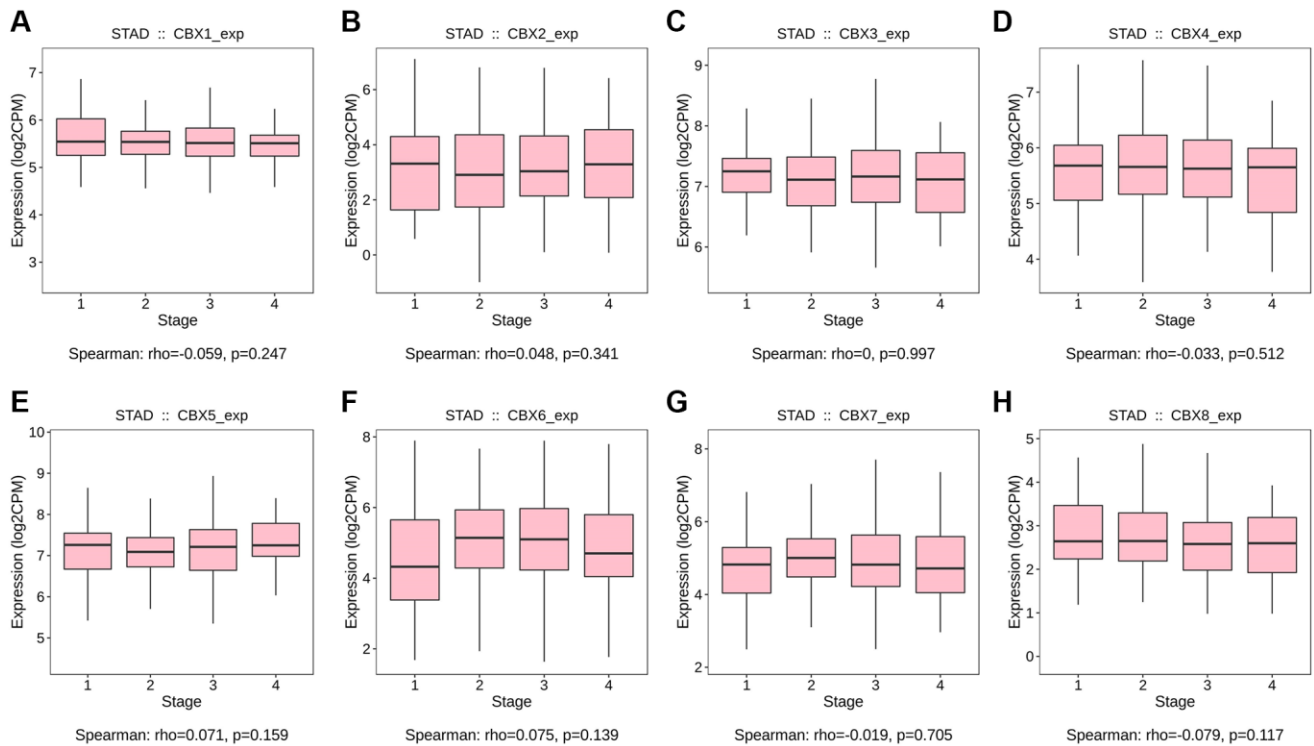
Supplementary Figure 1. Transcriptional expression comparison of CBXs in 20 different types of cancer diseases analyzed by ONCOMINE database. mRNA level was compared by student's *t*-test. Threshold setting: *P*-value <0.01; fold change: 1.5; gene rank: 10%.



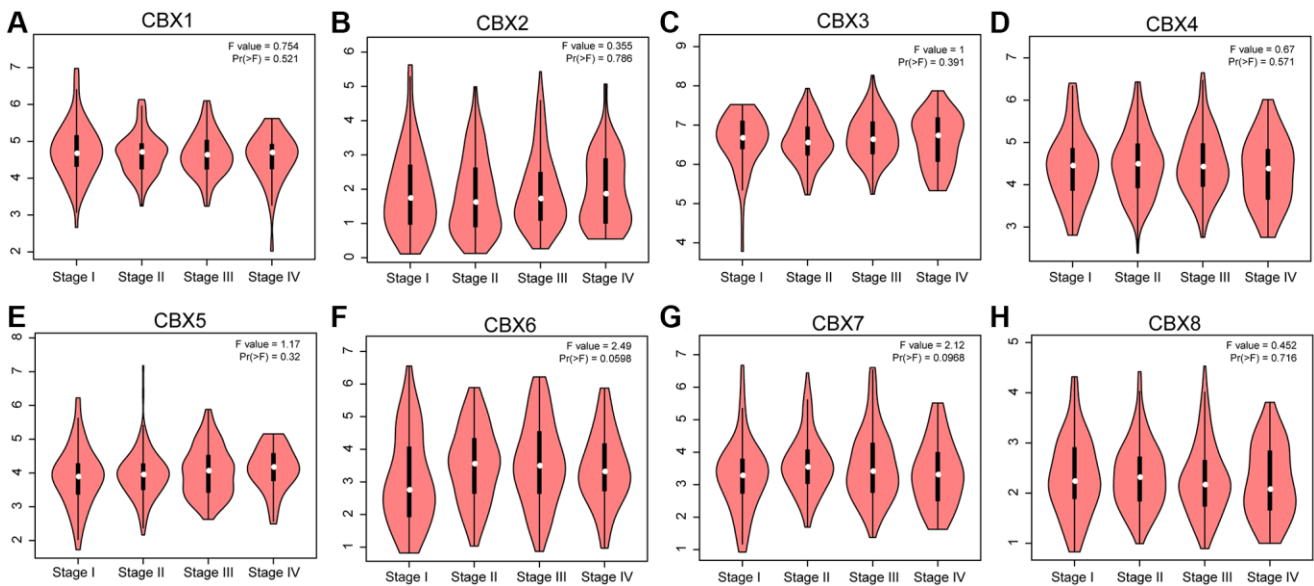
Supplementary Figure 2. Comparison of the mRNA expression level of 8 CBXs family members in gastric cancer tissues and adjacent normal tissues analyzed by the GEPIA online database. (A) CBX1; (B) CBX2; (C) CBX3; (D) CBX4; (E) CBX5; (F) CBX6; (G) CBX7; (H) CBX8. *P < 0.05.



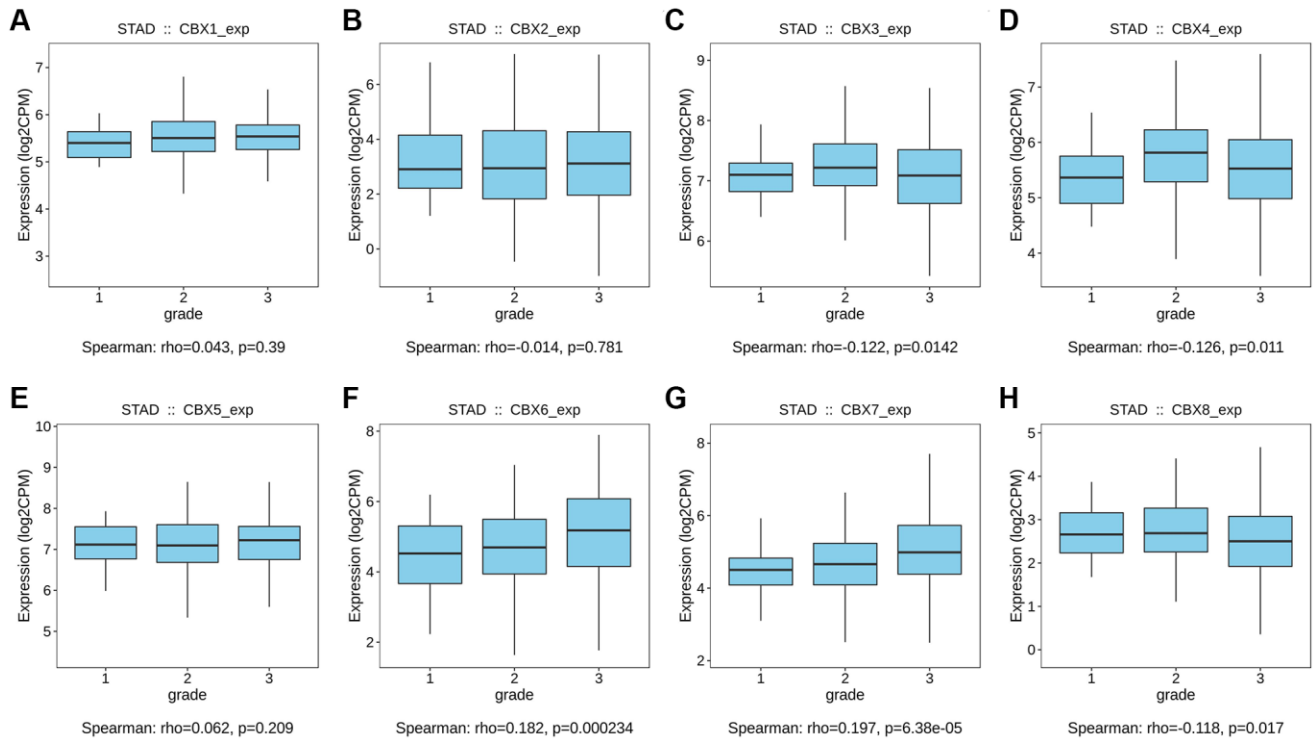
Supplementary Figure 3. Representative immunohistochemistry images of *CBXs* family members in gastric cancer tissues and normal tissues using the human protein atlas database. (A) *CBX1*; (B) *CBX2*; (C) *CBX3*; (D) *CBX4*; (E) *CBX5*; (F) *CBX6*; (G) *CBX7*; (H) *CBX8*. Abbreviations: L: low expression; M: middle expression; H: high expression.



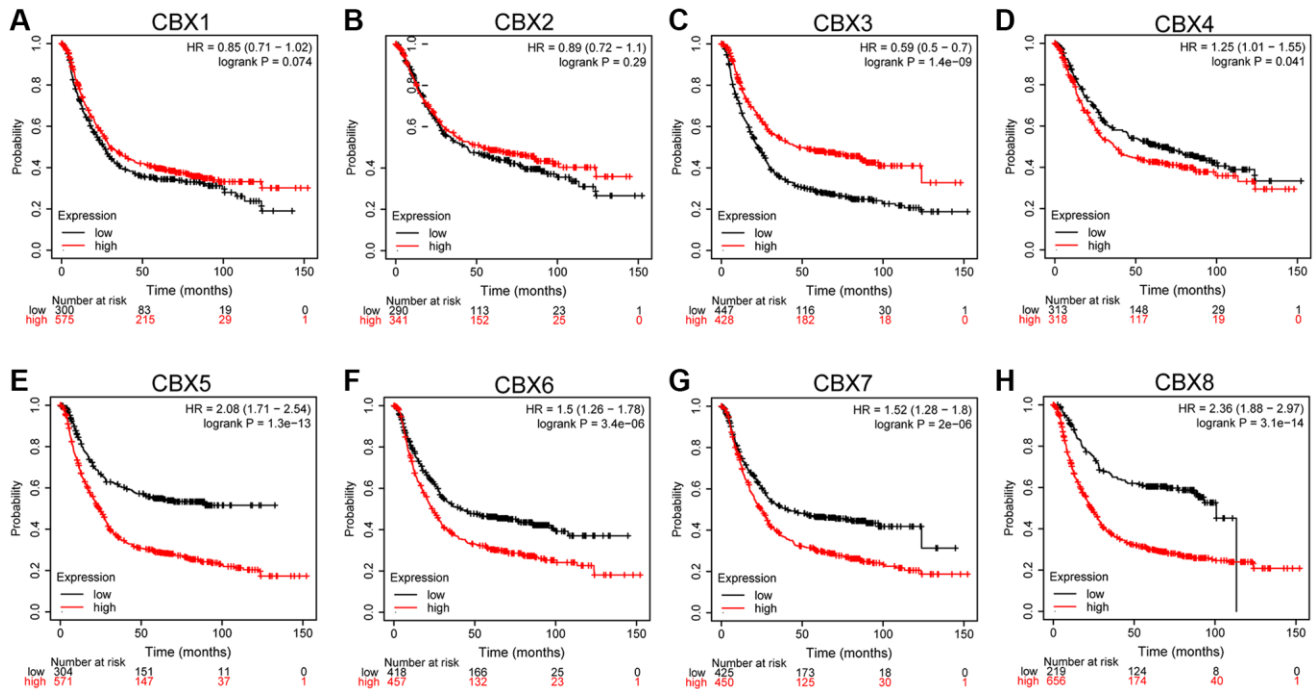
Supplementary Figure 4. Spearman's correlation analysis of the *CBXs* expression and clinical stages in gastric cancer via the TISIDB database. (A) *CBX1*; (B) *CBX2*; (C) *CBX3*; (D) *CBX4*; (E) *CBX5*; (F) *CBX6*; (G) *CBX7*; (H) *CBX8*.



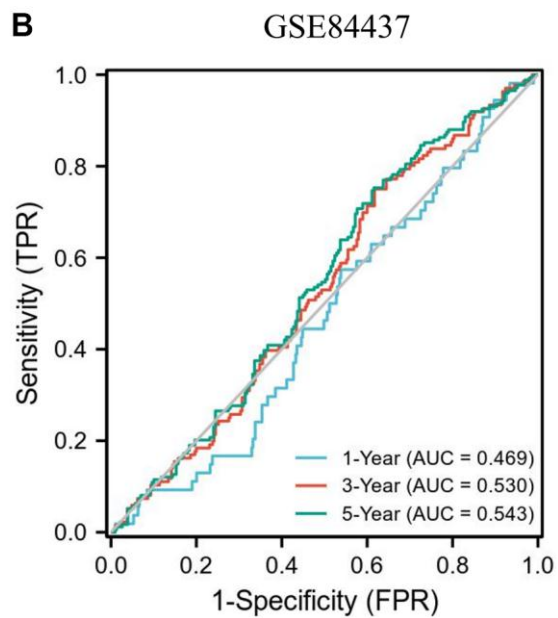
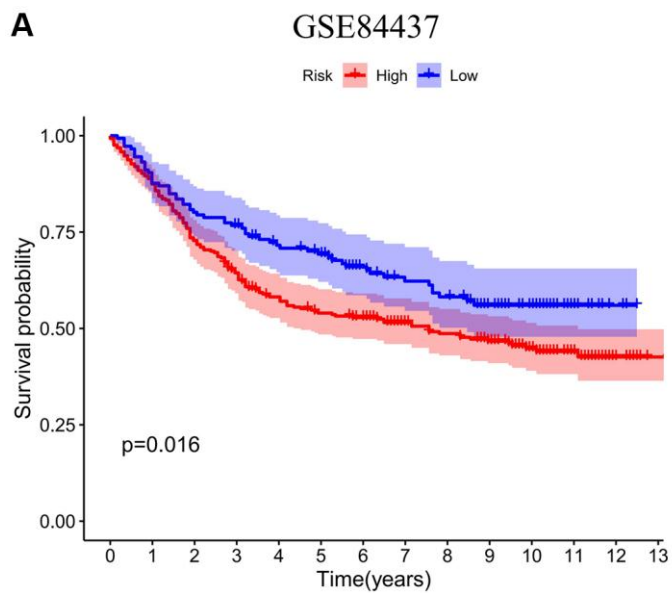
Supplementary Figure 5. Correlation between mRNA expression of *CBXs* family members and pathological stages of gastric cancer patients analyzed by GEPIA. (A) *CBX1*; (B) *CBX2*; (C) *CBX3*; (D) *CBX4*; (E) *CBX5*; (F) *CBX6*; (G) *CBX7*; (H) *CBX8*.



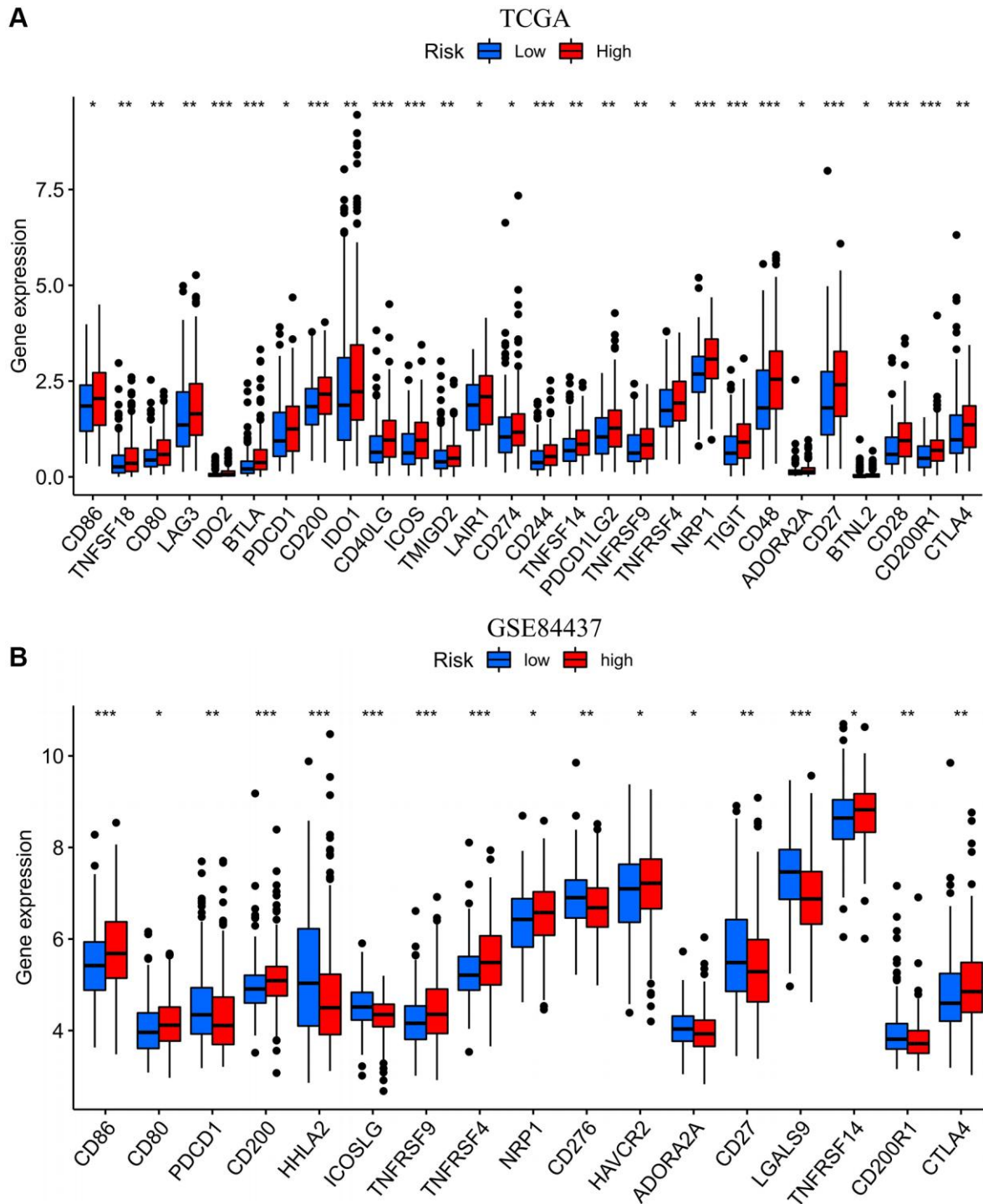
Supplementary Figure 6. Spearman's correlation analysis of the CBXs expression and clinical grades in gastric cancer using the TISIDB database. (A) CBX1; (B) CBX2; (C) CBX3; (D) CBX4; (E) CBX5; (F) CBX6; (G) CBX7; (H) CBX8.



Supplementary Figure 7. The overall survival rate of CBXs family members in gastric cancer patients using the microarray data. (A) CBX1; (B) CBX2; (C) CBX3; (D) CBX4; (E) CBX5; (F) CBX6; (G) CBX7; (H) CBX8.



Supplementary Figure 10. Validation of the CBXs prognostic model in GSE84437. (A) Overall survival curves for gastric cancer patients in the high/low risk group. (B) The ROC curve of measuring the predictive value. Abbreviation: CBXs, chromobox proteins.



Supplementary Figure 11. Correlation analysis between risk score and immune checkpoints. Wilcox. test statistical analysis found significant differences in immune checkpoints between low and high risk score patients in TCGA-STAD (A) and GSE84437 (B) data sets. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.