

Table S1 Information of IHC-P, IF samples

ID	Age	Sex	Pathological type	Experiments
P1	59	Female	ER ⁺	IHC-P, IF
P2	37	Female	ER ⁺	IHC-P, IF
P3	46	Female	ER ⁺	IHC-P, IF
P4	71	Female	ER ⁺	IHC-P, IF
P5	41	Female	ER ⁺	IHC-P, IF
P6	28	Female	ER ⁺	IHC-P, IF
P7	26	Female	ER ⁺	IHC-P, IF

Table S2 Details of primer pairs

Gene	Sequence
<i>GAPDH</i>	Forward-GTCTCCTCTGACTTCAACAGCG
	Reverse-ACCACCCTGTTGCTGTAGCCAA
<i>SAA1</i>	Forward-TCGTCCTTGGCGAGGCTTTTG
	Reverse-AGGTCCCCTTTTGGCAGCATCA
<i>COL1A1</i>	Forward-GATTCCTGGACCTAAAGGTGC
	Reverse-AGCCTCTCCATCTTTGCCAGCA
<i>CDH1</i>	Forward-GCCTCCTGAAAAGAGAGTGGAAG
	Reverse-TGGCAGTGTCTCTCCAAATCCG
<i>VIM</i>	Forward-AGGCAAAGCAGGAGTCCACTGA
	Reverse-ATCTGGCGTTCCAGGGACTCAT
<i>PTN</i>	Forward-TGGAGCTGAGTGCAAGCAAACC
	Reverse-CTGGAAGTGGTATTTGCACTCCG

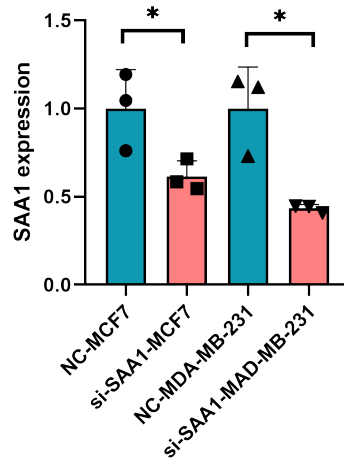


Figure S1 SAA1 expression after knocking down in tumor cells.

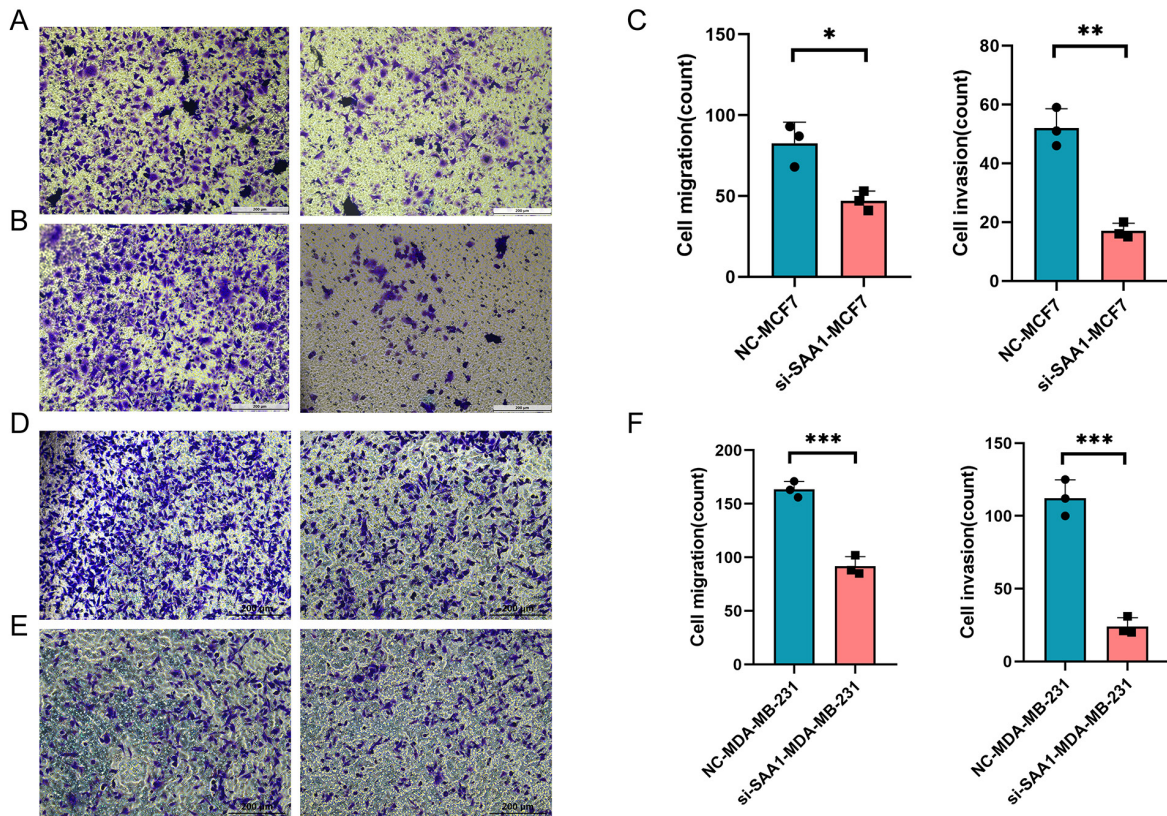


Figure S2 SAA1 knock down could weaken the invasion and migration abilities of tumor cells. (A) Micrograph of changes in the migration ability of tumor cells treated with knock down SAA1 for 12 h of MCF7 cells. (B) Micrograph of changes in the invasion ability of tumor cells treated with knock down SAA1 for 12 h of MCF7 cells. (C) Bar graph represents the number of migration and invasion tumor cells contained differential expression of SAA1 of MCF7. (D) Micrograph of changes in the migration ability of tumor cells treated with knock down SAA1 for 12 h of MDA-MB-231 cells. (E) Micrograph of changes in the invasion ability of tumor cells treated with knock down SAA1 for 12 h of MDA-MB-231 cells. (F) Bar graph represents the number of migration and invasion tumor cells contained differential expression of SAA1 of MDA-MB-231.

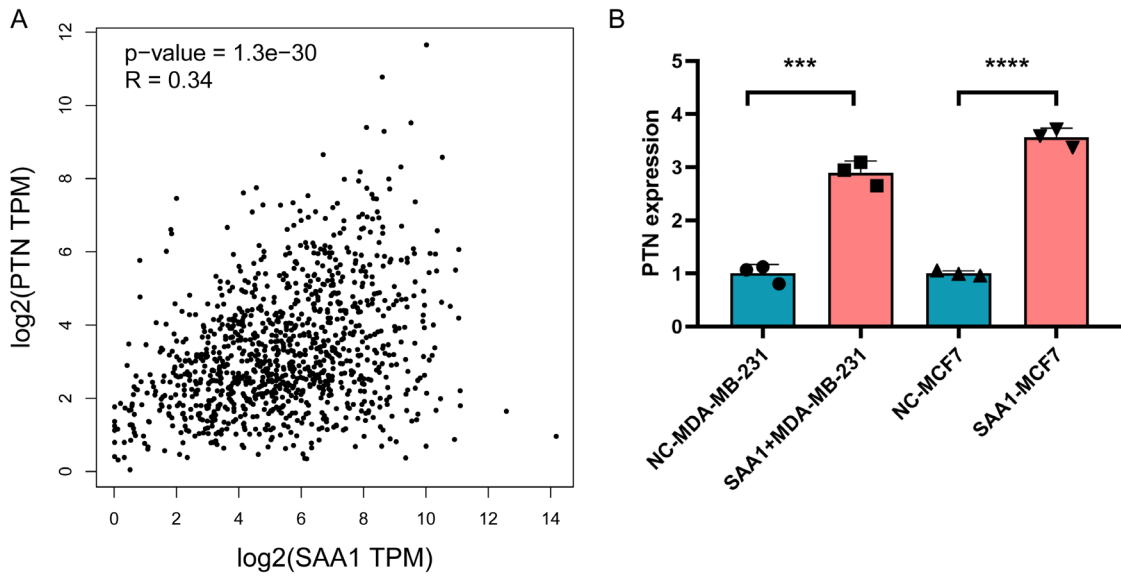


Figure S3 Correlation and regulatory relationship between SAA1 and PTN expression. (A) Correlation analysis of SAA1 and PTN expression. (B) Effect of SAA1 overexpression on PTN mRNA expression levels.

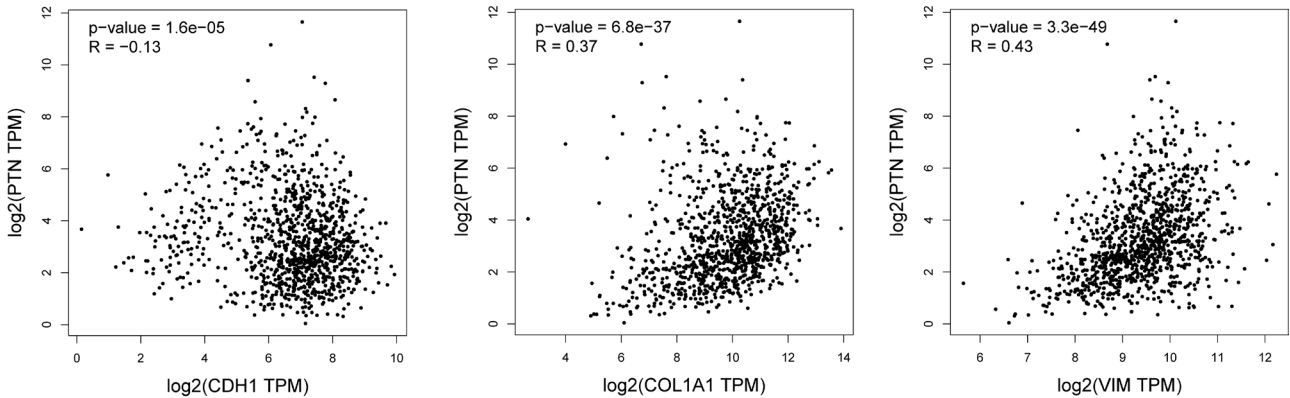


Figure S4 Correlation of PTN expression with EMT-related genes in breast cancer.