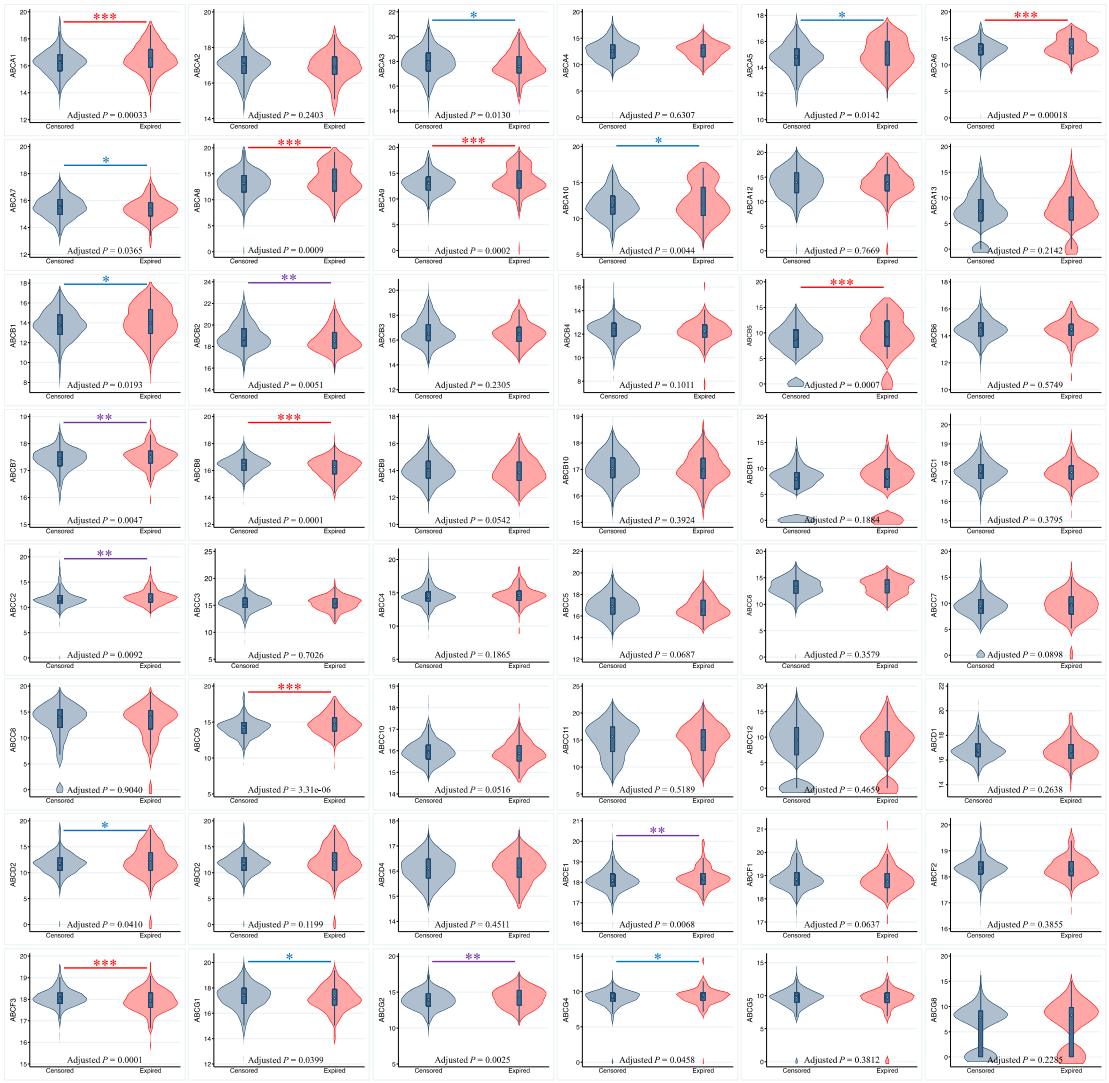

Figure S1 Forty-eight ABC transporters in 1217 breast cancer samples obtained from TCGA dataset. *$P < 0.05$ (blue color), **$P < 0.01$ (purple color), ***$P < 0.001$ (red color).

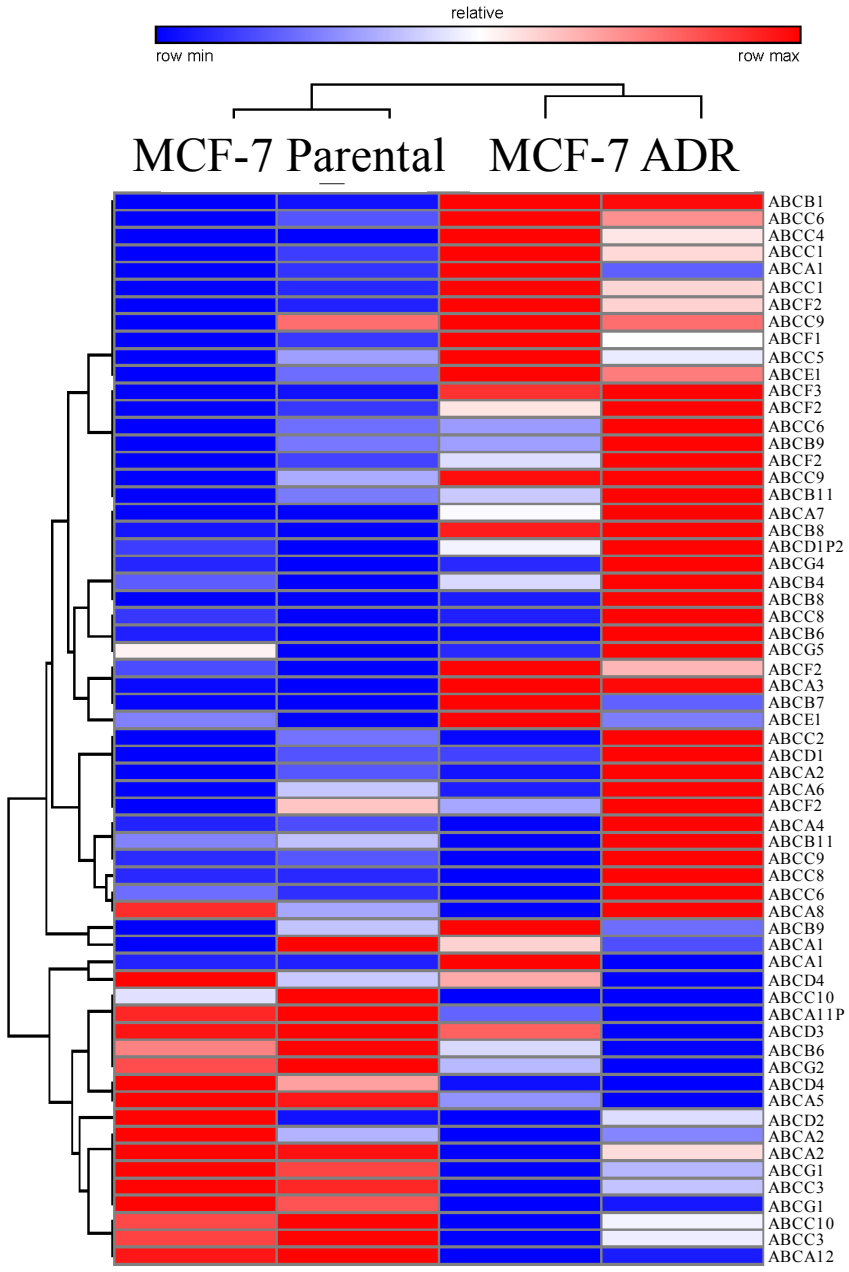

Figure S2 Gene expression of ABC transporters in doxorubicin-selected MCF-7/ADR cells. Raw data for GSE24460 dataset is analyzed. The heatmap shows ABC transporters genes ranked from the highest level of expression to the lowest level of expression in doxorubicin-selected MCF-7/ADR and MCF-7 parental cells. ABCB1 ranked the highest expressive gene of ABC transporters in doxorubicin-selected MCF-7/ADR cell.

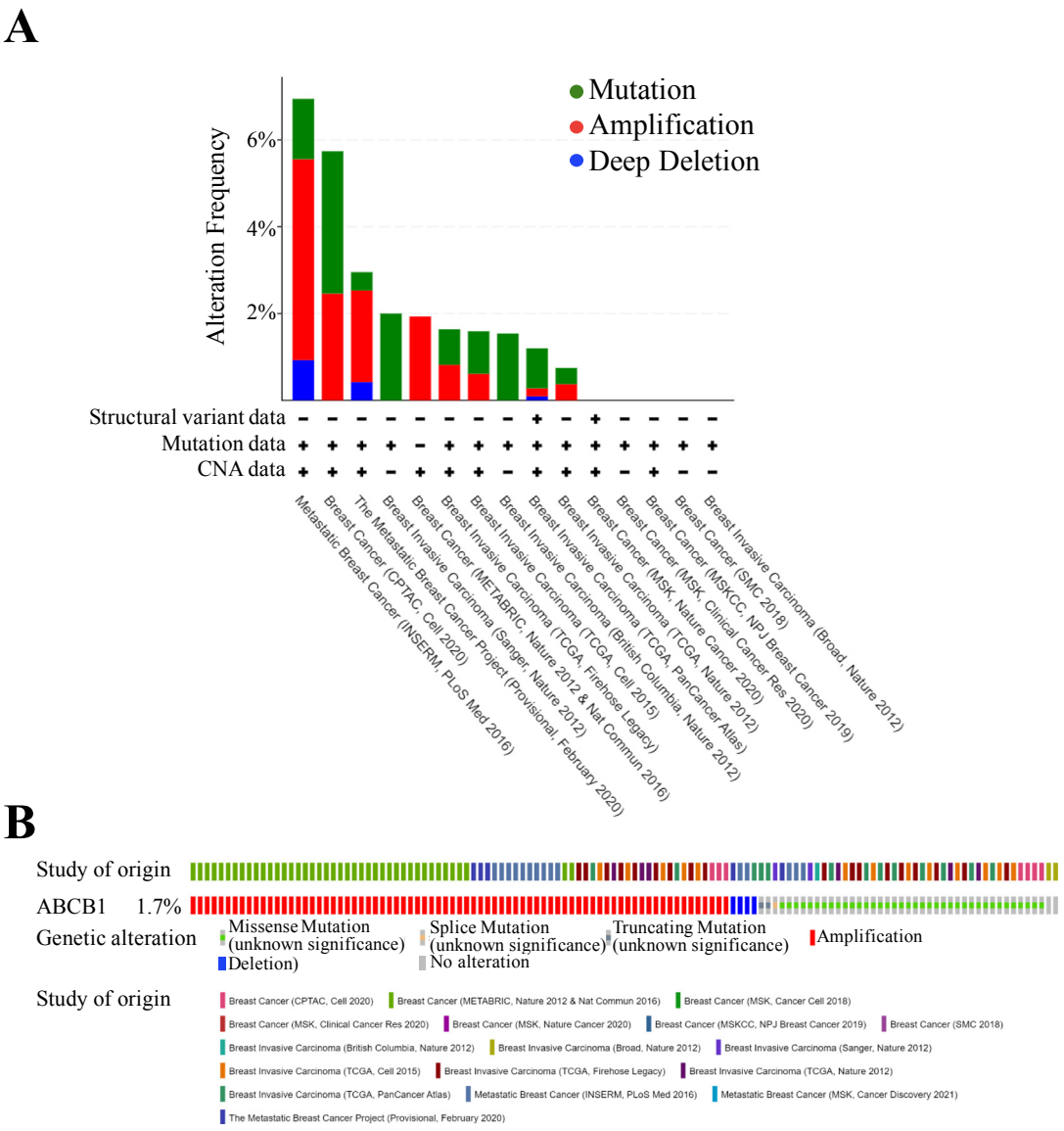

Figure S3 Alteration of *ABCB1* gene in breast cancer. (A) Total 15 datasets with 10 928 samples are selected from cBioPortal. Percentage of mutation, amplification, deep deletion of *ABCB1* gene is showed. (B) All forms of genetic alteration of *ABCB1* gene are listed, including misssense mutation, splice mutation, truncating mutation, amplification or deep deletion.

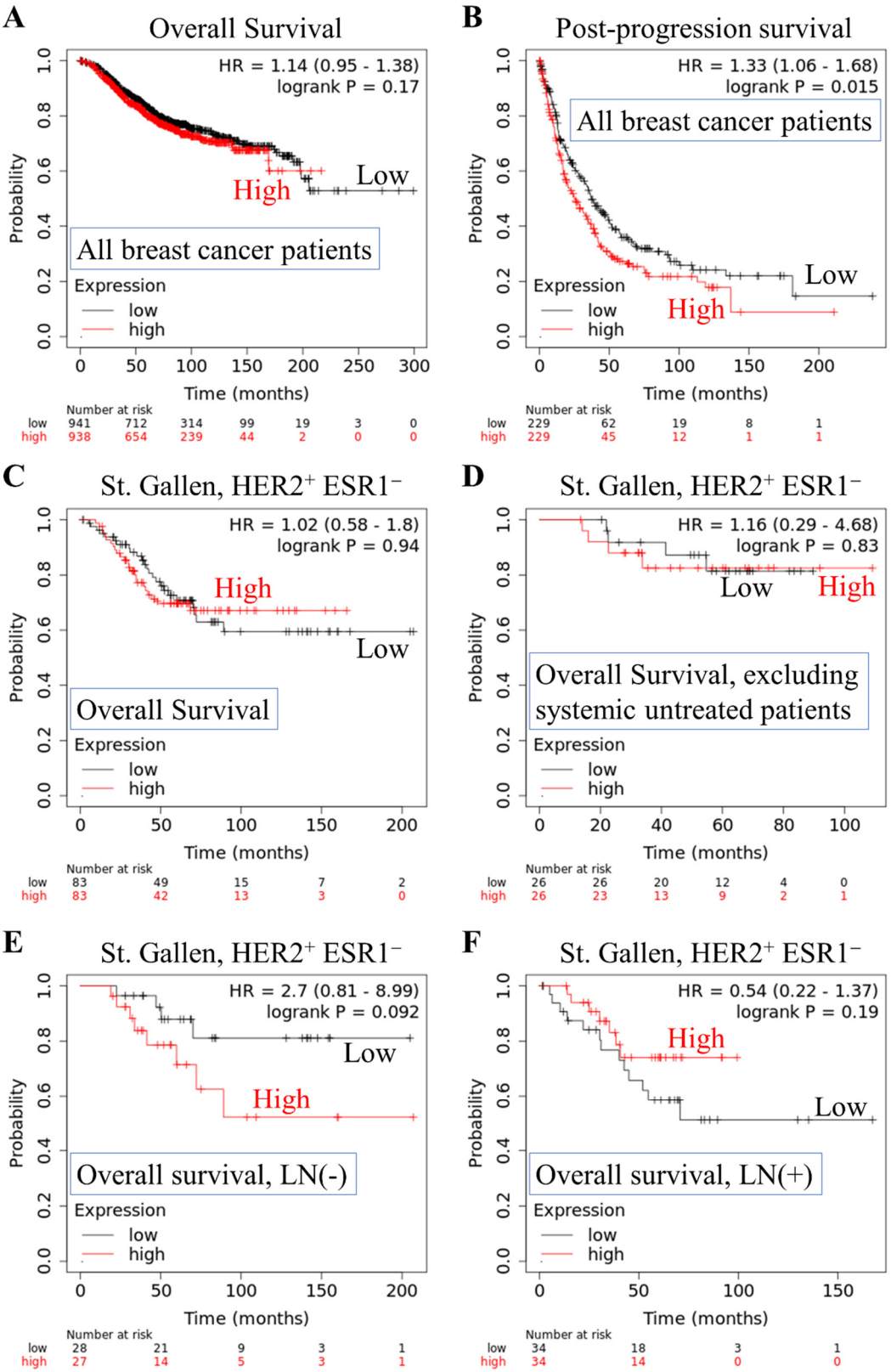

Figure S4 Comparison of the expression of *ABCB1* mRNA in Kaplan-Meier Plotter and survival of breast cancer patients. (A) Overall survival of all breast cancer patients.

(B) Post-progression survival of all breast cancer patients. (C) According to St. Gallen molecular subtypes, $HER2^+$, $ESR1^-$ breast cancer patients were selected and overall survival was compared between high or low expression of *ABCB1*. (D) Overall survival of $HER2^+$, $ESR1^-$ breast cancer patients, excluding the patients without systemic treatment. (E) Overall survival of $HER2^+$, $ESR1^-$ breast cancer patients without lymph node metastasis. (F) Overall survival of $HER2^+$, $ESR1^-$ breast cancer patients with lymph node metastasis. ESR1, estrogen receptor 1; HER2, human epidermal growth factor receptor type II; HR, hazard ratio; LN, lymph node.

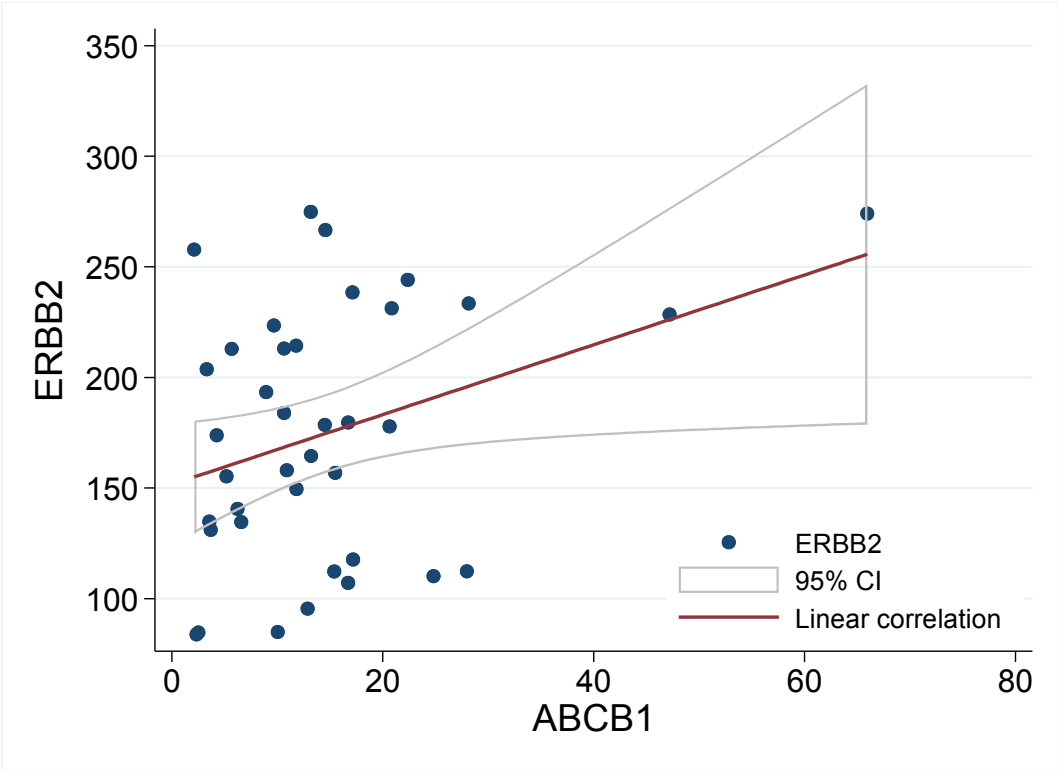

Figure S5 Linear correlation between ABCB1 and ERBB2 mRNA in 38 breast cancer patients from GSE43837 dataset. Spearman's rank correlation coefficiency = 0.255 with 95% CI: -0.070 to 0.532, *P* value = 0.1219.

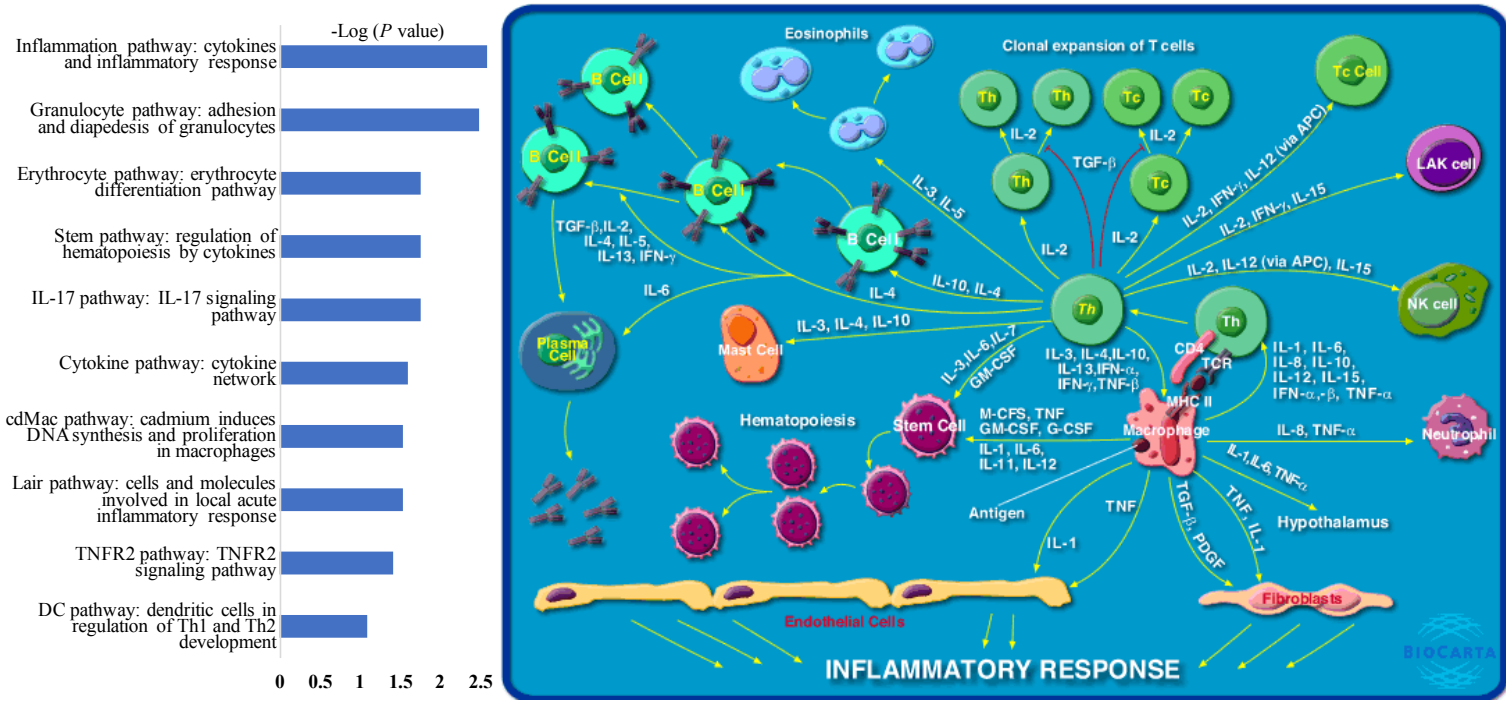

Figure S6 BIOCARTA pathway analysis for the upregulated genes in ABCB1-overexpressing mammary epithelial cells from GSE173411 dataset.

Cytokines and inflammatory response-related genes, including *IL-6*, *CSF1*, and *CSF3*, were significantly correlated with ABCB1 overexpression.

Table S1 Sequence of primers for qPCR.

Gene	Sequence of primer	Amplicon length (bp)
IL6	Sense: CAT GTG TGA AAG CAG CAA AGA GGC	109
	Antisense: CAG GCA AGT CTC CTC ATT GAA TCC AG	
CSF1	Sense: CTG CTG TTG TTG GTC TGT CTC CTG	90
	Antisense: CAG GTG TCC ACT CCC AAT CAT GTG	
CSF3	Sense: CCC TCC CCA TCC CAT GTA TTT ATC TC	84
	Antisense: CCG TTC TGC TCT TCC CTG TCT TTA	
PTGS2	Sense: CTG CCT CAA TTC AGT CTC TCA TCT GC	80
	Antisense: GAG CTC TGG ATC TGG AAC ACT GAA TG	
VEGFA	Sense: CAG AAG GAG GAG GGC AGA ATC ATC A	85
	Antisense: AGG GTC TCG ATT GGA TGG CAG TAG	
GAPDH	Sense: AGC CAC ATC GCT CAG ACA C	66
	Antisense: GCC CAA TAC GAC CAA ATC C	

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Table S2 Tumor size of P1 PDX mice.

Days after implantation		8~43	50	57	64	71	81	85	92	99
		Tumor volume (mm^3)								
P1-1	Right	0	55.4	50.2	60.5	76.1	72.1	76.9	85.6	73.7
	Left	0	40.3	95.2	141.0	41.6	98.8	111.5	146.7	126.9
P1-2	Right	0	50.6	49.6	137.8	106.3	399.9	190.1	*	*
	Left	0	130.3	160.4	266.0	364.6	250.0	751.1	*	*
P1-3	Right	0	176.1	159.0	186.6	261.7	111.8	464.4	794.0	*
	Left	0	161.0	173.3	226.1	301.5	474.3	315.0	596.0	*

*The mice were sacrificed and the cancer tissues were transplanted to P2 mice.