

Figure S1 The permutations plot in positive and negative mode is applied to check the validity and the degree of overfit for the model.

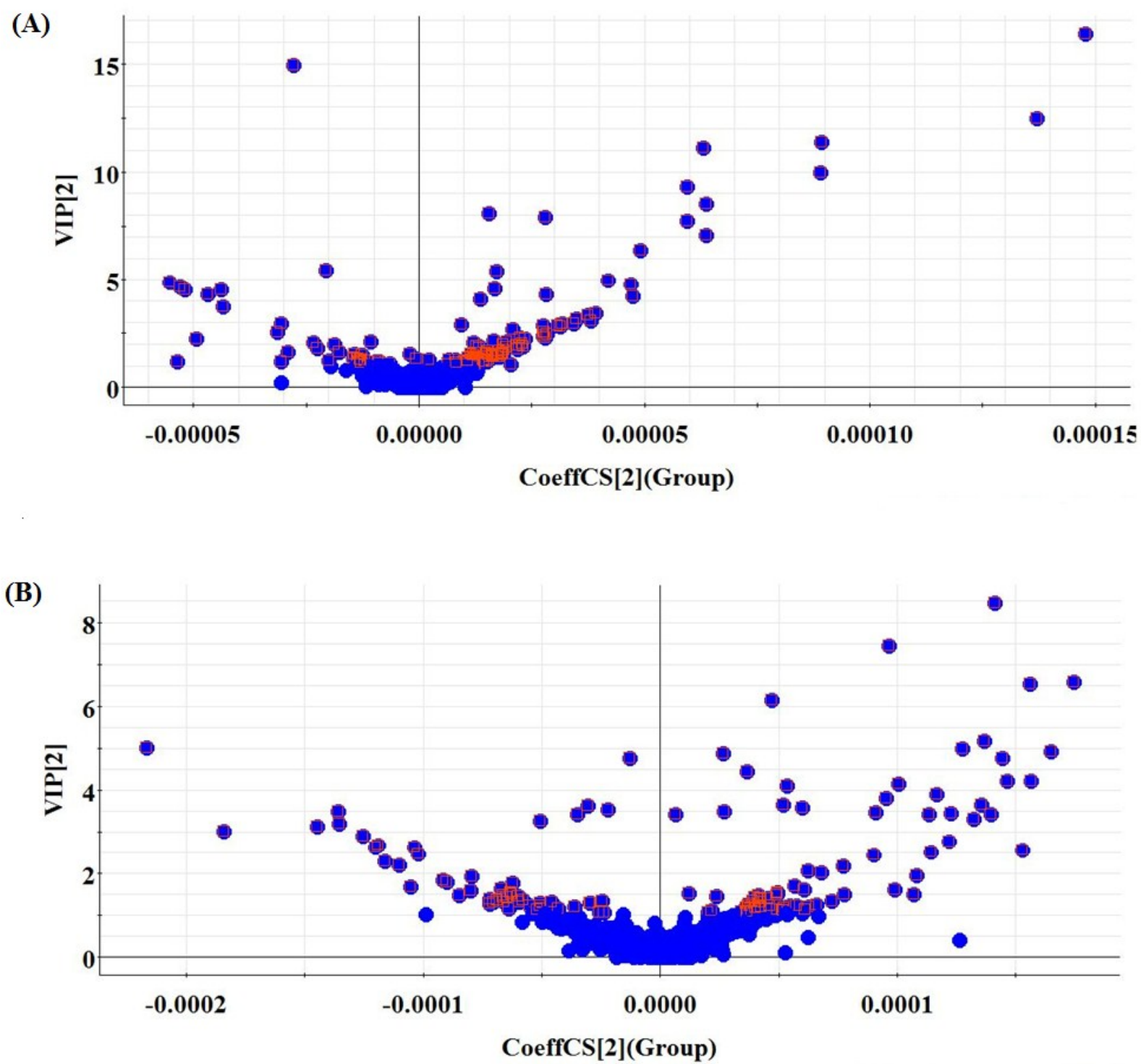


Figure S2 VIP-plot of OPLS-DA model of UPLC –MS spectra data for control and model group in positive ion mode (A) and negative ion mode (B). □□□□□□□□ □□□□ □

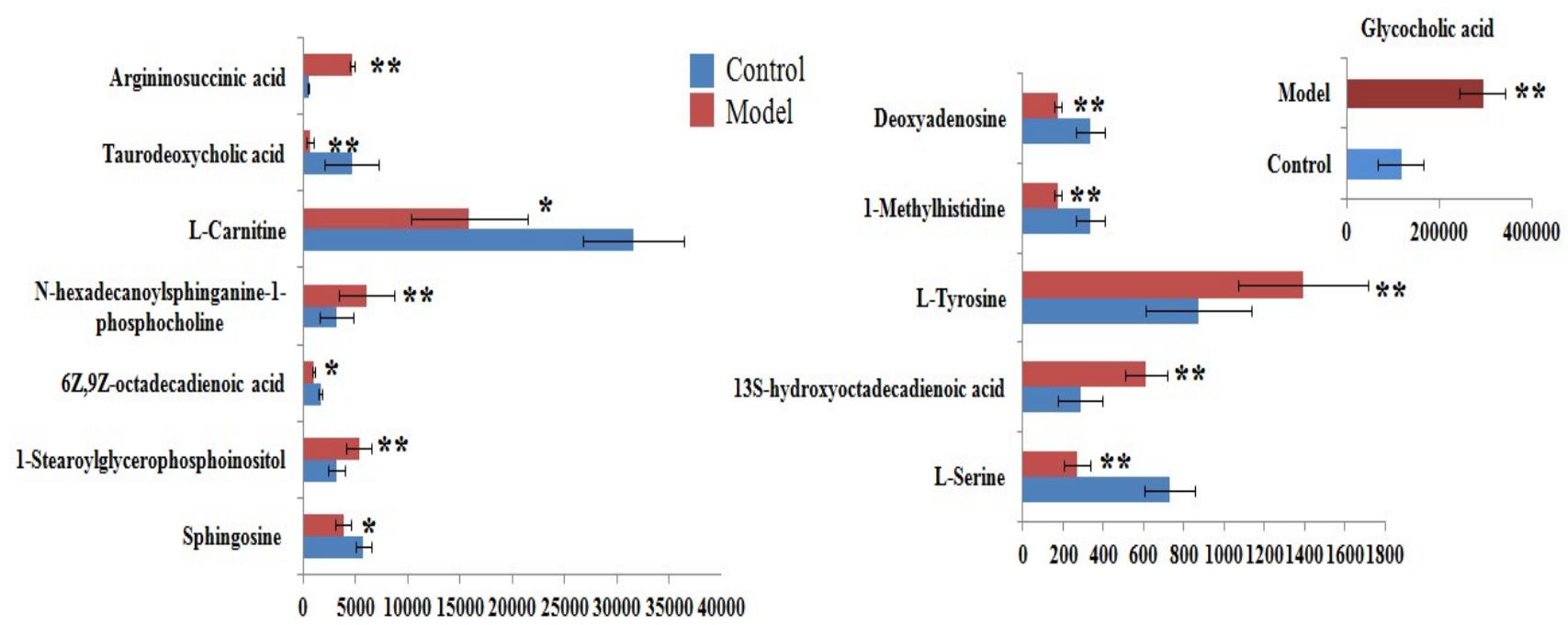


Figure S3 Relative signal intensities of the cell metabolites identified by UPLC /MS

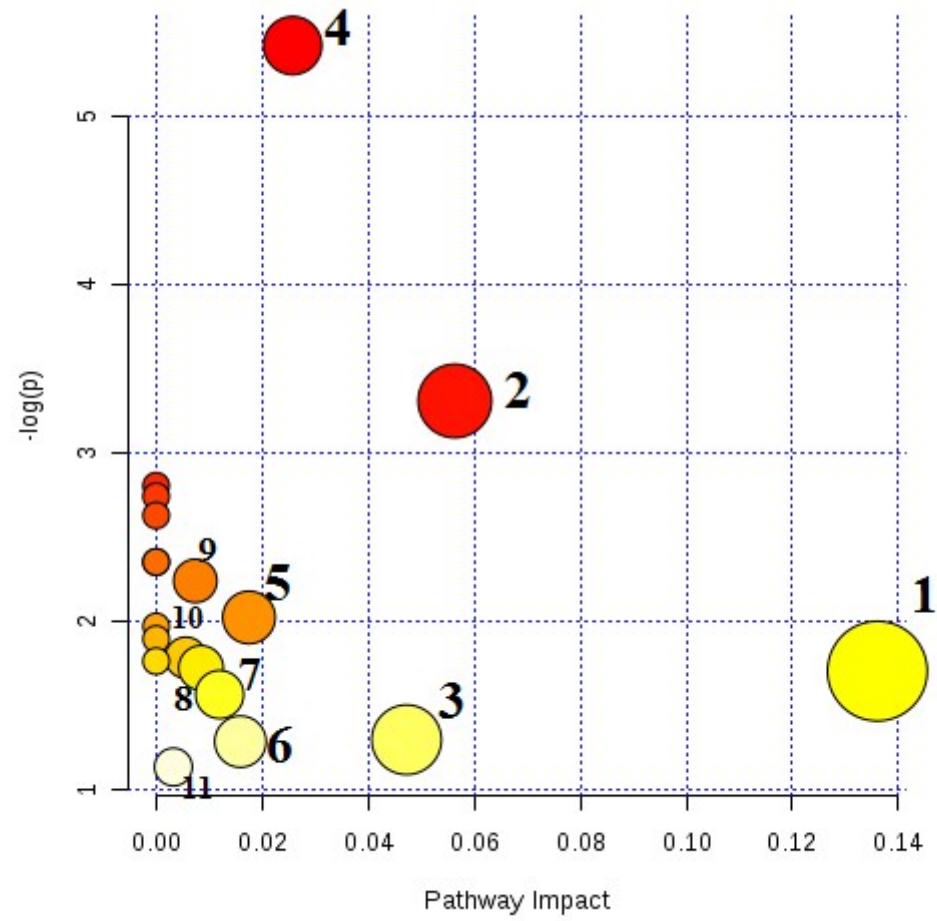


Figure S4 Altered metabolomic pathways of cell sample in control and model group. 1, Glycine, serine and threonine metabolism; 2, Aminoacyl-tRNA biosynthesis; 3, Tyrosine metabolism; 4, Sphingolipid metabolism; 5, Methane metabolism; 6, Arginine and proline metabolism; 7 Cysteine and methionine metabolism; 8, Primary bile acid biosynthesis; 9, Phenylalanine, tyrosine and tryptophan biosynthesis; 10, Histidine metabolism; 11, Purine metabolism

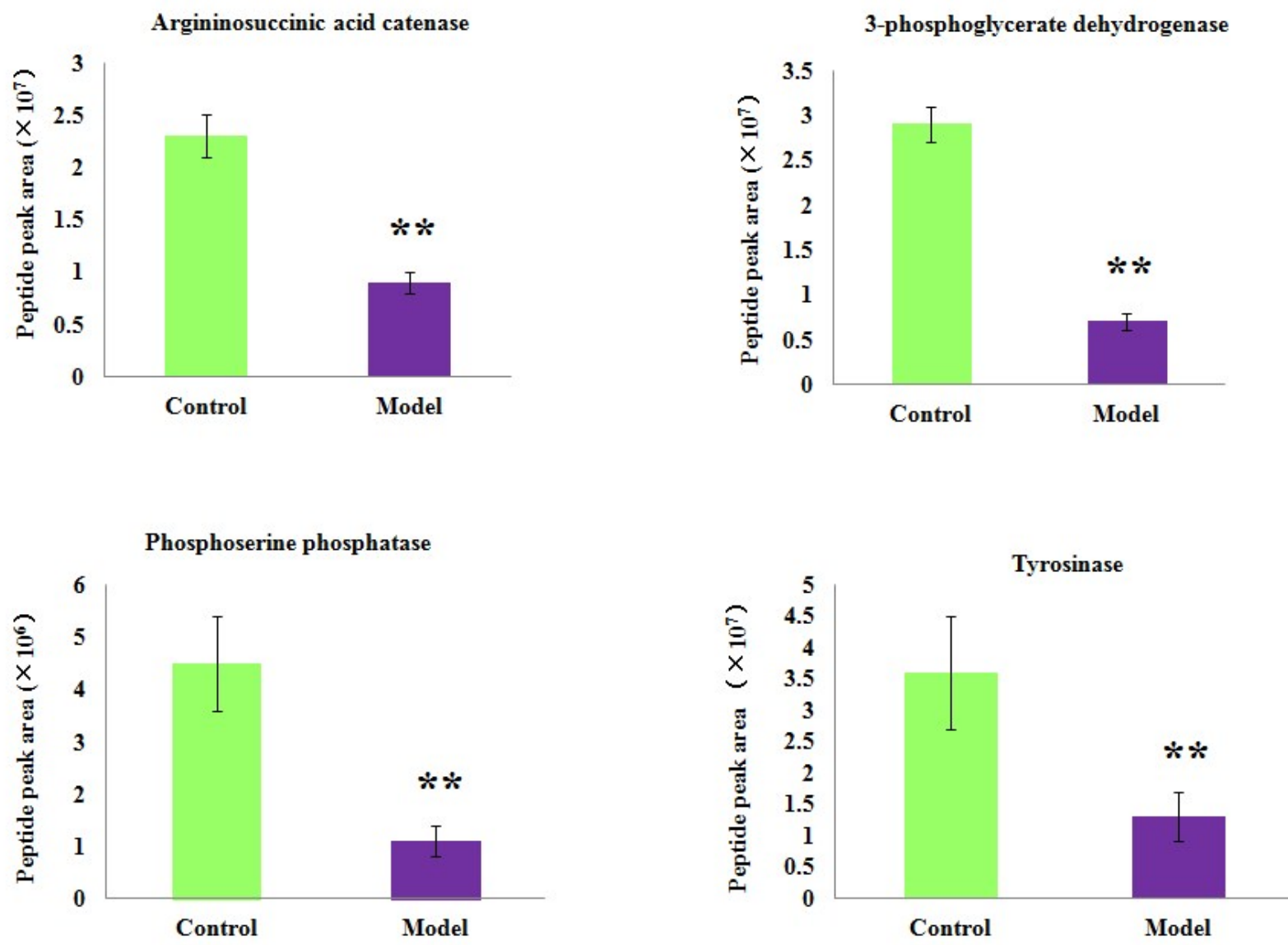















Figure S5 The changes of key enzymes in the reprogrammed metabolic pathways of SCLCC revealed by targeted proteomics

Table S1 The differentially expressed metabolites in SCLC cell by cell metabolomics

No.	Ion form	m/z	Proposed compound	Formula	Rt(min)	Trends
1	M+H	380.26	Sphingosine	C18H38NO5P	4.30	
2	M+H	623.32	1-Stearoylglycerophosphoinositol	C27H53O12P	6.88	
3	M+H	106.05	L-Serine	C3H7NO3	4.97	
4	M-H	295.23	13S-hydroxyoctadecadienoic acid	C18H32O3	5.36	
5	M-H	279.23	6Z,9Z-octadecadienoic acid	C18H32O2	4.98	
6	M-H	180.07	L-Tyrosine	C9H11NO3	0.88	
7	M+H	170.09	1-Methylhistidine	C7H11N3O2	0.65	
8	M+H	705.59	N-hexadecanoylsphinganine-1-phosphocholine	C39H81N2O6P	9.58	
9	M+H	162.11	L-Carnitine	C7H15NO3	0.64	
10	M+H	274.09	Deoxyadenosine	C10H13N5O3	0.65	
11	M-H	464.30	Glycocholic acid	C26H43NO6	2.41	
12	M-H	498.29	Taurodeoxycholic acid	C26H45NO6S	2.72	
13	M+H	290.97	Argininosuccinic acid	C10H18N4O6	3.11	

Note: Blue logo represents decline, orange logo represents rise.