

Table S1. Metabolite components in cells in the control, model, and CK3 groups.

No.	Name	ppm
1	Bile acid	0.73(m)
2	Lipid	0.87(m)a, 1.28(m), 5.30(m)
3	Pantothenic acid	0.90(s), 3.96(s)
4	Leucine	0.95(dd), 1.70(m), 3.72(t), 1.78(m)
5	Valine	0.99(d), 1.01(d,J=6.6 Hz), 1.04(d)
6	Ethanol	1.19(t), 3.65(q)
7	Fatty acid	1.25(s), 1.3(m)
8	Lactate	1.33(d), 4.11(q)
9	Alanine	1.48(d), 3.77(q)
10	Acetic acid	1.92(s)
11	N-Acetylaspartate	2.02(s)
12	Glutamate	2.06(m), 2.35(m), 3.76(m)
13	Methionine	2.13(s), 2.65(t)
14	O-Acetylcholine	2.14(s), 3.21(s),
15	Glutathione	2.16(m), 2.55(m)
16	Acetone	2.24(s)
17	GABA	2.31(t,J <sup>1</sup> / <sub>4</sub> 7.2 Hz), 3.01(t, J <sup>1</sup> / <sub>4</sub> 7.2 Hz)
18	Succinic acid	2.41(s)
19	$\alpha$ -Ketoglutarate	2.44(t), 3.01(t)
20	Citrate	2.67(d), 2.72(d,16.2 Hz), 2.55(d,16.2 Hz), 2.82(d)
21	Dimethylamine	2.73(s)
22	Asparagine	2.87(q), 2.95(dd), 4.01(q)
23	Creatine	3.03s, 3.93s
24	Creatinine	3.05(s)
25	Choline	3.22(s), 4.07(t)
26	Acetylcholine	3.23(s)
27	Taurine	3.26(t), 3.42(t)
28	Inositol	3.28(t,J=9.0 Hz), 3.54(dd,J=3.0,6.6 Hz), 3.63(t,J=9.6 Hz), 4.07(t,J=3.0 Hz)
29	Methanol	3.36(s)
30	Methyl phosphate	3.47(d,10.2)
31	Glycine	3.57(s), 3.68(s)
32	Glycerol	3.56(dd,J=9.6,3.6 Hz), 3.66(dd,J=11.4,4.2 Hz)
33	Phenylacetylglycine	3.68(s), 7.37(m), 7.43(m)
34	Glucose	3.90dd
35	Mannose	3.94d
36	Uridine	4.36(m), 5.90(d), 5.92(d), 7.88(d)
37	Guanosine monophosphate	5.94(d), 8.20(s)
38	Uridine diphosphate	5.97(s), 7.96(d)
39	Uridine monophosphate	6.00(m), 8.11(d)
40	Adenosine monophosphate	6.14(d), 8.14(d), 8.24(s), 8.27(s), 8.58(3), 8.61(s)
41	Fumaric acid	6.52(s)
42	Tyrosine	6.89(d), 7.19(d)
43	Tryptophan	7.33(d)
44	Hypoxanthine	8.20(s), 8.21(s)
45	Formic acid	8.44(s)

