

This supplementary information completely replaces the previous version. 1st April 2011.

Supplementary Table

Intracellular							
Metabolites	Time point (hr)	Monuron	Nifedipine	KBrO <sub>3</sub>	Mannitol	Diclofenac	Ochratoxin A
Betaine 3.261-3.286	6	0.94 ±0.05	0.84 ±0.03	0.99 ±0.06	1.00 ±0.01	0.93 ±0.08	1.02 ±0.04
	24	<i>0.83 ±0.01</i>	1.04 ±0.01	<b>0.67 ±0.04</b>	0.92 ±0.06	1.17 ±0.11	<i>0.74 ±0.05</i>
	72	0.97 ±0.08	0.90 ±0.04	<b>0.25 ±0.01</b>	<i>0.77 ±0.03</i>	1.29 ±0.02	<b>0.53 ±0.13</b>
Alanine 1.475-1.503	6	1.08 ±0.01	0.91 ±0.06	1.03 ±0.02	0.89 ±0.01	<i>1.37 ±0.10</i>	1.05 ±0.01
	24	1.07 ±0.04	0.94 ±0.03	1.12 ±0.04	0.88 ±0.04	0.87 ±0.12	1.14 ±0.03
	72	0.90 ±0.02	1.03 ±0.02	<b>1.62 ±0.01</b>	<i>0.70 ±0.04</i>	<b>0.58 ±0.04</b>	<i>1.24 ±0.04</i>
Isoleucine 0.9278-0.9335	6	0.89 ±0.06	0.94 ±0.05	1.05 ±0.05	0.95 ±0.06	1.07 ±0.06	0.96 ±0.06
	24	0.70 ±0.09	1.04 ±0.05	1.05 ±0.03	1.02 ±0.06	0.98 ±0.10	1.14 ±0.12
	72	0.98 ±0.08	1.00 ±0.13	<i>1.37 ±0.04</i>	<i>0.83 ±0.04</i>	0.96 ±0.03	<i>0.71 ±0.02</i>
Aspartate 1.322-1.681	6	1.16 ±0.03	1.01 ±0.02	1.01 ±0.04	0.98 ±0.03	1.09 ±0.07	1.22 ±0.06
	24	1.15 ±0.04	1.00 ±0.03	0.93 ±0.01	0.99 ±0.02	1.13 ±0.01	0.92 ±0.07
	72	1.02 ±0.02	0.99 ±0.01	0.84 ±0.01	1.03 ±0.07	<i>1.30 ±0.01</i>	<i>0.77 ±0.09</i>
Lactate 1.322-1.329	6	0.94 ±0.05	0.84 ±0.03	0.99 ±0.06	<i>0.81 ±0.06</i>	<b>1.61 ±0.13</b>	0.94 ±0.04
	24	<i>0.83 ±0.01</i>	1.04 ±0.01	<i>0.70 ±0.04</i>	<i>0.75 ±0.05</i>	<i>1.21 ±0.14</i>	<b>1.55 ±0.11</b>
	72	0.97 ±0.08	0.90 ±0.08	<b>0.32 ±0.01</b>	<i>0.72 ±0.15</i>	<b>0.60 ±0.11</b>	<i>0.82 ±0.02</i>
Myoinositol 4.06-4.094	6	0.97 ±0.02	0.9 ±0.04	0.98 ±0.03	1.04 ±0.01	0.89 ±0.07	1.03 ±0.06
	24	0.86 ±0.01	1.03 ±0.01	0.94 ±0.04	0.96 ±0.03	0.99 ±0.08	<i>0.77 ±0.04</i>
	72	1.01 ±0.05	<i>0.88 ±0.02</i>	0.90 ±0.01	0.86 ±0.01	0.95 ±0.01	<i>0.80 ±0.10</i>
GPC 3.231-3.242	6	<i>0.72 ±0.04</i>	<i>0.81 ±0.02</i>	0.97 ±0.02	0.90 ±0.03	<i>1.28 ±0.07</i>	1.00 ±0.01
	24	<b>0.48 ±0.05</b>	0.96 ±0.02	<i>1.49 ±0.07</i>	<i>0.82 ±0.01</i>	<i>1.36 ±0.08</i>	<i>0.82 ±0.06</i>
	72	<i>0.71 ±0.04</i>	1.05 ±0.05	<b>1.76 ±0.05</b>	<b>0.67 ±0.02</b>	<i>0.81 ±0.02</i>	0.93 ±0.13
PC 3.216-3.231	6	0.98 ±0.03	0.87 ±0.05	0.92 ±0.05	1.06 ±0.01	0.85 ±0.04	1.06 ±0.04
	24	0.98 ±0.05	0.99 ±0.01	1.13 ±0.07	1.01 ±0.02	<i>0.79 ±0.07</i>	<i>0.79 ±0.03</i>
	72	1.12 ±0.07	<i>0.75 ±0.02</i>	<i>0.83 ±0.04</i>	<i>0.75 ±0.01</i>	<i>0.84 ±0.03</i>	0.99 ±0.07
Choline 3.204-3.216	6	1.05 ±0.01	0.91 ±0.01	0.82 ±0.05	1.03 ±0.02	1.03 ±0.03	1.00 ±0.08
	24	1.00 ±0.09	1.09 ±0.01	<i>0.69 ±0.06</i>	1.02 ±0.06	1.09 ±0.05	0.97 ±0.11
	72	<i>0.69 ±0.03</i>	<i>0.76 ±0.02</i>	<b>0.38 ±0.09</b>	<b>0.52 ±0.01</b>	0.90 ±0.02	0.94 ±0.14
GSH/GSSG 2.186-2.199	6	1.05 ±0.02	0.90 ±0.03	0.90 ±0.03	1.10 ±0.04	0.93 ±0.01	1.09 ±0.05
	24	1.04 ±0.02	0.90 ±0.01	0.90 ±0.04	1.03 ±0.07	0.94 ±0.03	0.85 ±0.01
	72	1.06 ±0.02	0.92 ±0.02	<i>1.32 ±0.02</i>	1.11 ±0.09	<i>1.23 ±0.04</i>	1.06 ±0.07
Culture media							
Metabolites	Time point (hr)	Monuron	Nifedipine	KBrO <sub>3</sub>	Mannitol	Diclofenac	Ochratoxin A
Alanine 1.46-1.492	6	0.99 ±0.01	0.94 ±0.01	0.96 ±0.01	0.97 ±0.02	0.95 ±0.01	1.01 ±0.01
	24	0.95 ±0.03	0.94 ±0.02	0.90 ±0.03	0.97 ±0.02	<i>0.79 ±0.03</i>	0.98 ±0.02
	72	0.85 ±0.04	0.92 ±0.01	1.03 ±0.01	0.95 ±0.03	<b>0.57 ±0.03</b>	1.14 ±0.14
Pyruvate 2.37-2.385	6	1.07 ±0.01	1.03 ±0.01	0.97 ±0.02	0.92 ±0.01	<i>1.40 ±0.02</i>	1.02 ±0.01
	24	1.03 ±0.02	0.89 ±0.01	0.99 ±0.03	0.94 ±0.05	<b>1.87 ±0.06</b>	1.11 ±0.01
	72	0.85 ±0.06	0.95 ±0.01	<i>1.42 ±0.01</i>	<i>0.83 ±0.05</i>	<b>1.66 ±0.03</b>	<b>2.08 ±0.15</b>
5-OP 4.162-4.183	6	1.10 ±0.02	<i>1.23 ±0.01</i>	<i>0.80 ±0.06</i>	<b>0.54 ±0.15</b>	0.97 ±0.15	0.90 ±0.09
	24	<i>1.25 ±0.02</i>	<i>1.31 ±0.02</i>	1.07 ±0.06	<i>0.69 ±0.07</i>	1.11 ±0.05	0.99 ±0.06
	72	1.02 ±0.04	1.04 ±0.01	1.16 ±0.01	0.96 ±0.05	1.19 ±0.06	1.19 ±0.05
Glucose 5.221-5.260	6	0.99 ±0.01	0.98 ±0.01	0.97 ±0.02	0.94 ±0.01	1.07 ±0.02	0.97 ±0.02
	24	1.02 ±0.02	1.14 ±0.01	1.00 ±0.02	0.92 ±0.03	1.14 ±0.01	0.98 ±0.02
	72	1.06 ±0.12	<i>1.27 ±0.02</i>	<b>0.34 ±0.01</b>	<i>0.82 ±0.06</i>	0.90 ±0.04	<b>0.33 ±0.07</b>
Lactate 1.333-1.353	6	1.03 ±0.02	<i>0.78 ±0.05</i>	0.92 ±0.06	<i>1.23 ±0.06</i>	<b>0.42 ±0.01</b>	1.18 ±0.14
	24	0.88 ±0.04	<i>0.68 ±0.04</i>	1.00 ±0.09	0.96 ±0.04	<b>0.51 ±0.04</b>	1.04 ±0.09
	72	<i>0.83 ±0.08</i>	0.95 ±0.01	<b>2.01 ±0.05</b>	<i>0.83 ±0.09</i>	0.99 ±0.06	<b>2.78 ±0.03</b>
Isoleucine 0.9204-0.9318	6	0.97 ±0.02	0.98 ±0.01	0.97 ±0.01	0.91 ±0.01	1.06 ±0.02	0.98 ±0.01
	24	0.97 ±0.01	1.01 ±0.01	0.98 ±0.02	0.90 ±0.03	1.09 ±0.01	1.07 ±0.01
	72	0.89 ±0.03	0.90 ±0.02	<b>0.59 ±0.29</b>	0.94 ±0.02	1.09 ±0.02	1.13 ±0.03
Lysine 1.822-1.918	6	0.99 ±0.02	0.97 ±0.01	0.96 ±0.01	0.93 ±0.01	1.03 ±0.02	0.94 ±0.01
	24	0.96 ±0.01	0.99 ±0.02	0.95 ±0.01	0.94 ±0.02	1.00 ±0.01	1.03 ±0.01
	72	0.95 ±0.02	0.96 ±0.01	0.84 ±0.01	1.00 ±0.01	0.94 ±0.01	1.03 ±0.01
Glutamine 2.07-2.139	6	1.00 ±0.01	0.98 ±0.01	1.01 ±0.01	0.97 ±0.01	1.00 ±0.01	0.95 ±0.01
	24	0.94 ±0.01	0.98 ±0.01	0.94 ±0.01	0.95 ±0.03	0.98 ±0.01	1.01 ±0.01
	72	0.96 ±0.06	0.98 ±0.02	<i>0.80 ±0.01</i>	0.88 ±0.03	<i>0.80 ±0.01</i>	1.12 ±0.07
Phenylalanine 7.355-7.368	6	<i>0.83 ±0.01</i>	<i>0.83 ±0.01</i>	1.01 ±0.01	0.87 ±0.01	1.14 ±0.02	0.97 ±0.01
	24	0.82 ±0.02	<i>0.82 ±0.01</i>	0.95 ±0.01	0.89 ±0.03	0.94 ±0.01	1.14 ±0.02
	72	<i>0.82 ±0.03</i>	<i>0.82 ±0.01</i>	<i>0.82 ±0.01</i>	1.06 ±0.02	0.98 ±0.04	0.93 ±0.03
Tyrosine 6.871-6.907	6	0.99 ±0.02	0.99 ±0.01	0.98 ±0.01	0.93 ±0.01	1.05 ±0.02	0.98 ±0.02
	24	1.01 ±0.02	1.03 ±0.01	0.98 ±0.01	0.93 ±0.03	1.01 ±0.01	1.05 ±0.01
	72	0.92 ±0.04	1.00 ±0.01	0.86 ±0.01	1.00 ±0.02	0.99 ±0.02	1.05 ±0.04
Tryptophan 4.06-4.08	6	0.97 ±0.02	<i>1.32 ±0.04</i>	0.99 ±0.01	<b>0.51 ±0.10</b>	1.04 ±0.07	0.91 ±0.06
	24	1.03 ±0.06	1.17 ±0.08	0.98 ±0.08	<b>0.36 ±0.04</b>	<i>1.23 ±0.05</i>	<i>1.40 ±0.01</i>
	72	1.10 ±0.16	<i>1.35 ±0.10</i>	<i>0.79 ±0.14</i>	<b>0.23 ±0.11</b>	<i>1.44 ±0.10</i>	<b>2.66 ±0.22</b>
Threonine 1.298-1.324	6	0.99 ±0.02	0.99 ±0.02	0.97 ±0.01	0.93 ±0.01	0.98 ±0.02	1.02 ±0.01
	24	1.09 ±0.01	0.97 ±0.08	1.02 ±0.03	0.89 ±0.04	<i>0.80 ±0.07</i>	1.07 ±0.04
	72	0.89 ±0.03	0.97 ±0.01	0.93 ±0.01	1.02 ±0.03	0.94 ±0.08	1.04 ±0.03
Leucine 0.957-0.9769	6	0.98 ±0.01	0.99 ±0.01	0.97 ±0.01	0.93 ±0.02	1.04 ±0.02	0.98 ±0.01
	24	0.97 ±0.01	1.02 ±0.01	0.98 ±0.01	0.91 ±0.02	1.09 ±0.01	1.06 ±0.01
	72	0.93 ±0.03	0.91 ±0.01	0.88 ±0.01	0.92 ±0.02	1.06 ±0.01	1.18 ±0.05

Supplementary Table S1. Effects of Chemical Treatment on Key Metabolite Concentration in the RPTEC/TERT1 Intracellular Fraction and Culture Medium. Data are shown as means +/- s.e.m. and are expressed relative to the time-matched control. Bold indicates significant changes >1.5 fold. Italics indicate other statistically significant changes (p<0.05).