

Supplementary Tables

Tables S1A and B. A. Intracellular ROS Levels. Data are expressed as f/cell number and are means \pm SEM from three independent experiments (each containing eight repetitions). The data collected in these tables came from experiments in which 100 μ M Trolox (Trolox) was used. Trolox was solubilized in dimethyl sulphoxide (DMSO) at concentration of 100 mM then diluted in cell medium at a final concentration of 100 μ M. In each experimental set, samples were also treated with DMSO (1 μ l dimethyl sulphoxide in 1 ml medium) to exclude its possible effect or toxicity on cells. **B.** Statistical significance calculated by Student's t-test (Prism5 software, GraphPad, San Diego, CA, USA).

A

Time	Ctr	Ctr + DMSO	Ctr + Trolox	RPM	RPM + DMSO	RPM + Trolox
24 h	0.173 \pm 0.010	0.175 \pm 0.003	0.161 \pm 0.006	0.392 \pm 0.012	0.381 \pm 0.012	0.168 \pm 0.020
48 h	0.190 \pm 0.024	0.201 \pm 0.019	0.197 \pm 0.005	0.535 \pm 0.025	0.569 \pm 0.010	0.203 \pm 0.006
72 h	0.179 \pm 0.037	0.189 \pm 0.021	0.181 \pm 0.005	0.453 \pm 0.042	0.413 \pm 0.010	0.135 \pm 0.035
96 h	0.192 \pm 0.018	0.197 \pm 0.001	0.166 \pm 0.011	0.447 \pm 0.034	0.458 \pm 0.015	0.159 \pm 0.036

B

Sample comparison	24 h	48 h	72 h	96 h
Ctr vs RPM	***p < 0.001	***p < 0.001	***p < 0.001	***p < 0.001
Ctr+DMSO vs RPM+DMSO	***p < 0.001	***p < 0.001	***p < 0.001	***p < 0.001
Ctr+Trolox vs RPM+Trolox	p = 0.754	p = 0.485	p = 0.263	p = 0.862
Ctr+DMSO vs Ctr+Trolox	p = 0.105	p = 0.849	p = 0.730	p = 0.050
RPM+DMSO vs RPM+Trolox	***p < 0.001	***p < 0.001	**p < 0.005	**p < 0.005

Tables S2A and B. A. Intracellular Ca²⁺ Levels. Data are expressed as f/cell number and are means \pm SEM from three independent experiments (each containing eight repetitions). **B.** Statistical significance calculated by Student's t-test (Prism5 software, GraphPad, San Diego, CA, USA).

A

Time	Ctr	Ctr + DMSO	Ctr + Trolox	RPM	RPM + DMSO	RPM + Trolox
24 h	0.195 \pm 0.007	0.181 \pm 0.005	0.196 \pm 0.020	0.274 \pm 0.011	0.264 \pm 0.012	0.220 \pm 0.013
48 h	0.171 \pm 0.005	0.167 \pm 0.005	0.156 \pm 0.004	0.273 \pm 0.016	0.269 \pm 0.010	0.159 \pm 0.006
72 h	0.199 \pm 0.004	0.195 \pm 0.002	0.206 \pm 0.008	0.218 \pm 0.018	0.201 \pm 0.010	0.207 \pm 0.008
96 h	0.175 \pm 0.036	0.183 \pm 0.001	0.183 \pm 0.009	0.215 \pm 0.005	0.208 \pm 0.015	0.211 \pm 0.016

B

Sample comparison	24 h	48 h	72 h	96 h
Ctr vs RPM	***p < 0.001	***p < 0.001	p = 0.361	p = 0.333
Ctr+DMSO vs RPM+DMSO	**p < 0.005	***p < 0.001	p = 0.588	p = 0.172
Ctr+Trolox vs RPM+Trolox	p = 0.371	p = 0.699	p = 0.934	p = 0.202
Ctr+DMSO vs Ctr+Trolox	p = 0.507	p = 0.161	p = 0.253	p > 0.999
RPM+DMSO vs RPM+Trolox	*p < 0.05	***p < 0.001	p = 0.664	p = 0.898

Tables S3A and B. A. Mitochondrial membrane potential. Data are expressed as fred/fgreen ratio and are means \pm SEM from three independent experiments (each containing eight repetitions). **B.** Statistical significance calculated by Student's t-test (Prism5 software, GraphPad, San Diego, CA, USA).

A

Time	Ctr	Ctr + DMSO	Ctr + Trolox	RPM	RPM + DMSO	RPM + Trolox
24 h	0.698 \pm 0.020	0.701 \pm 0.003	0.690 \pm 0.010	0.696 \pm 0.030	0.699 \pm 0.010	0.673 \pm 0.110
48 h	0.718 \pm 0.027	0.711 \pm 0.023	0.588 \pm 0.110	0.577 \pm 0.030	0.566 \pm 0.031	0.705 \pm 0.047
72 h	0.573 \pm 0.015	0.564 \pm 0.015	0.501 \pm 0.010	0.531 \pm 0.010	0.519 \pm 0.010	0.552 \pm 0.028
96 h	0.608 \pm 0.024	0.617 \pm 0.02	0.627 \pm 0.020	0.615 \pm 0.023	0.635 \pm 0.02	0.635 \pm 0.020

B

Sample comparison	24 h	48 h	72 h	96 h
Ctr vs RPM	p = 0.958	**p < 0.005	*p < 0.05	p = 0.850
Ctr+DMSO vs RPM+DMSO	p = 0.857	**p < 0.005	*p < 0.05	p = 0.559
Ctr+Trolox vs RPM+Trolox	p = 0.885	p = 0.383	p = 0.161	p = 0.791
Ctr+DMSO vs Ctr+Trolox	p = 0.352	p = 0.335	*p < 0.05	p = 0.753
RPM+DMSO vs RPM+Trolox	p = 0.760	*p < 0.05	*p < 0.05	p > 0.999

Tables S4A and B. A. Glucose levels in the medium. Data are expressed as (μg glucose/ml)/cell number and are means ± SEM from three independent experiments (each containing five repetitions). **B.** Statistical significance calculated by Student's t-test (Prism5 software, GraphPad, San Diego, CA, USA).

A

Time	Ctr	Ctr + DMSO	Ctr + Trolox	RPM	RPM + DMSO	RPM + Trolox
24 h	0.231 ± 0.001	0.215 ± 0.008	0.219 ± 0.019	0.318 ± 0.005	0.323 ± 0.001	0.262 ± 0.048
48 h	0.144 ± 0.003	0.139 ± 0.003	0.135 ± 0.003	0.247 ± 0.004	0.235 ± 0.005	0.148 ± 0.003
72 h	0.109 ± 0.001	0.103 ± 0.002	0.103 ± 0.001	0.175 ± 0.003	0.166 ± 0.001	0.108 ± 0.002
96 h	0.106 ± 0.001	0.101 ± 0.003	0.101 ± 0.001	0.171 ± 0.004	0.163 ± 0.003	0.104 ± 0.002

B

Sample comparison	24 h	48 h	72 h	96 h
Ctr vs RPM	***p < 0.001	***p < 0.001	***p < 0.001	***p < 0.001
Ctr+DMSO vs RPM+DMSO	***p < 0.001	***p < 0.001	***p < 0.001	***p < 0.001
Ctr+Trolox vs RPM+Trolox	p = 0.452	*p < 0.05	p = 0.089	p = 0.251
Ctr+DMSO vs Ctr+Trolox	p = 0.856	p = 0.399	p > 0.9999	p > 0.9999
RPM+DMSO vs RPM+Trolox	***p < 0.001	***p < 0.001	***p < 0.001	***p < 0.001

Tables S5A and B. A. Lactate levels in the medium. Data are expressed as (nmol lactate/ml)/cell number and are means ± SEM from three independent experiments (each containing five repetitions). **B.** Statistical significance calculated by Student's t-test (Prism5 software, GraphPad, San Diego, CA, USA).

A

Time	Ctr	Ctr + DMSO	Ctr + Trolox	RPM	RPM + DMSO	RPM + Trolox
24 h	0.417 ± 0.002	0.401 ± 0.021	0.341 ± 0.020	0.629 ± 0.020	0.617 ± 0.023	0.284 ± 0.021
48 h	0.357 ± 0.005	0.323 ± 0.017	0.271 ± 0.017	0.571 ± 0.032	0.565 ± 0.009	0.249 ± 0.022
72 h	0.215 ± 0.009	0.209 ± 0.015	0.201 ± 0.015	0.445 ± 0.025	0.431 ± 0.030	0.200 ± 0.029
96 h	0.195 ± 0.003	0.185 ± 0.013	0.179 ± 0.019	0.384 ± 0.019	0.373 ± 0.017	0.148 ± 0.018

B

Sample comparison	24 h	48 h	72 h	96 h
Ctr vs RPM	***p < 0.001	***p < 0.001	***p < 0.001	***p < 0.001
Ctr+DMSO vs RPM+DMSO	***p < 0.001	***p < 0.001	***p < 0.001	***p < 0.001
Ctr+Trolox vs RPM+Trolox	p = 0.359	p = 0.473	p = 0.977	p = 0.302
Ctr+DMSO vs Ctr+Trolox	p = 0.107	p = 0.097	p = 0.725	p = 0.807
RPM+DMSO vs RPM+Trolox	***p < 0.001	***p < 0.001	***p < 0.001	***p < 0.001

Tables S6A and B. A. Cell Height. Data are expressed as μm and are means ± SEM from three independent experiments (each containing five repetitions). **B.** Statistical significance calculated by Student's t-test (Prism5 software, GraphPad, San Diego, CA, USA).

A

Time	Ctr	Ctr + DMSO	Ctr + Trolox	RPM	RPM + DMSO	RPM + Trolox
24 h	6.10 ± 0.11	6.05 ± 0.12	5.93 ± 0.20	6.32 ± 0.17	6.27 ± 0.21	5.77 ± 0.13
48 h	6.41 ± 0.09	6.41 ± 0.11	6.15 ± 0.11	6.88 ± 0.10	6.93 ± 0.09	6.46 ± 0.10
72 h	6.21 ± 0.12	6.12 ± 0.10	6.09 ± 0.13	4.63 ± 0.14	4.51 ± 0.16	6.54 ± 0.10
96 h	6.71 ± 0.19	6.82 ± 0.17	6.51 ± 0.12	5.03 ± 0.11	4.97 ± 0.10	6.32 ± 0.11

B

Sample comparison	24 h	48 h	72 h	96 h
Ctr vs RPM	p = 0.338	*p < 0.05	**p < 0.01	**p < 0.01
Ctr+DMSO vs RPM+DMSO	p = 0.415	*p < 0.05	**p < 0.01	**p < 0.01
Ctr+Trolox vs RPM+Trolox	p = 0.235	p = 0.445	p = 0.504	p = 0.279
Ctr+DMSO vs Ctr+Trolox	p = 0.250	p = 0.233	p = 0.291	p = 0.296
RPM+DMSO vs RPM+Trolox	p = 0.137	*p < 0.05	**p < 0.01	**p < 0.01

Tables S7A and B. A. Actin filament mean length in a single cell. Data are expressed as arbitrary unit (a.u.) and are means ± SEM from three independent experiments (each containing five repetitions). **B.** Statistical significance calculated by Student's t-test (Prism5 software, GraphPad, San Diego, CA, USA).

A

Time	Ctr	Ctr + DMSO	Ctr + Trolox	RPM	RPM + DMSO	RPM + Trolox
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24 h	0.574 ± 0.06	0.560 ± 0.09	0.464 ± 0.05	0.577 ± 0.08	0.565 ± 0.09	0.435 ± 0.09
48 h	0.452 ± 0.05	0.460 ± 0.04	0.468 ± 0.06	0.771 ± 0.08	0.779 ± 0.09	0.621 ± 0.08
72 h	0.384 ± 0.01	0.391 ± 0.04	0.390 ± 0.04	0.673 ± 0.09	0.669 ± 0.04	0.372 ± 0.06
96 h	0.431 ± 0.02	0.411 ± 0.02	0.445 ± 0.07	0.661 ± 0.03	0.672 ± 0.03	0.379 ± 0.07

B

Sample comparison	24 h	48 h	72 h	96 h
Ctr vs RPM	p = 0.977	*p< 0.05	**p< 0.01	**p< 0.01
Ctr+DMSO vs RPM+DMSO	p = 0.382	*p< 0.05	**p< 0.01	**p< 0.01
Ctr+Trolox vs RPM+Trolox	p = 0.792	p = 0.202	p = 0.815	p = 0.542
Ctr+DMSO vs Ctr+Trolox	p = 0.404	p = 0.917	p = 0.987	p = 0.665
RPM+DMSO vs RPM+Trolox	p = 0.365	*p< 0.05	*p< 0.05	*p< 0.05

Tables S8A and B. A. Nucleus area. Data are expressed as μm^2 and are means \pm SEM from three independent experiments (each containing five repetitions). **B.** Statistical significance calculated by Student's t-test (Prism5 software, GraphPad, San Diego, CA, USA).

A

Time	Ctr	Ctr + DMSO	Ctr + Trolox	RPM	RPM + DMSO	RPM + Trolox
24 h	141.1 \pm 9.0	139.7 \pm 7.2	142.2 \pm 6.8	128.4 \pm 13.1	136.3 \pm 8.1	119.1 \pm 9.1
48 h	137.1 \pm 2.6	135.7 \pm 2.1	129.4 \pm 2.6	150.4 \pm 3.8	148.1 \pm 3.3	130.6 \pm 2.5
72 h	139.5 \pm 6.7	137.1 \pm 2.5	135.0 \pm 3.1	136.4 \pm 3.1	139.3 \pm 4.1	143.4 \pm 6.6
96 h	141.1 \pm 5.1	143.1 \pm 2.9	149.0 \pm 6.7	137.1 \pm 3.3	140.5 \pm 2.9	133.7 \pm 6.2

B

Sample comparison	24 h	48 h	72 h	96 h
Ctr vs RPM	p = 0.469	*p< 0.05	p = 0.6961	p = 0.546
Ctr+DMSO vs RPM+DMSO	p = 0.769	*p< 0.05	p = 0.671	p = 0.561
Ctr+Trolox vs RPM+Trolox	p = 0.112	p = 0.756	p = 0.314	p = 0.169
Ctr+DMSO vs Ctr+Trolox	p = 0.813	p = 0.133	p = 0.626	p = 0.464
RPM+DMSO vs RPM+Trolox	p = 0.231	*p< 0.05	p = 0.626	p = 0.377

Tables S9A and B. A. Nucleus roundness. Data are expressed as R (see Materials and Methods and Fig. 1) and are means \pm SEM from five independent experiments (each containing three repetitions). **B.** Statistical significance calculated by Student's t-test (Prism5 software, GraphPad, San Diego, CA, USA).

A

Time	Ctr	Ctr+DMSO	Ctr+Trolox	RPM	RPM+DMSO	RPM+Trolox
24 h	0.85 \pm 0.01	0.83 \pm 0.02	0.87 \pm 0.06	0.81 \pm 0.03	0.84 \pm 0.06	0.79 \pm 0.03
48 h	0.82 \pm 0.01	0.78 \pm 0.02	0.79 \pm 0.01	0.86 \pm 0.01	0.86 \pm 0.01	0.85 \pm 0.01
72 h	0.80 \pm 0.01	0.79 \pm 0.01	0.83 \pm 0.01	0.85 \pm 0.01	0.87 \pm 0.02	0.87 \pm 0.01
96 h	0.79 \pm 0.01	0.81 \pm 0.01	0.80 \pm 0.01	0.83 \pm 0.01	0.85 \pm 0.01	0.85 \pm 0.01

B

Sample comparison	24 h	48 h	72 h	96 h
Ctr vs RPM	p = 0.275	*p< 0.05	*p< 0.05	*p< 0.05
Ctr+DMSO vs RPM+DMSO	p = 0.882	*p< 0.05	*p< 0.05	*p< 0.05
Ctr+Trolox vs RPM+Trolox	p = 0.299	*p< 0.05	*p< 0.05	*p< 0.05
Ctr+DMSO vs Ctr+Trolox	p = 0.561	p = 0.678	p = 0.05	p = 0.519
RPM+DMSO vs RPM+Trolox	p = 0.498	p = 0.519	p> 0.999	p> 0.999

Tables S10A and B. A. Western blot analysis of samples at 24 h. Data are the relative expression calculated as ratio between the optical density (OD) \times mm² of each band and OD \times mm² of the corresponding GAPDH band, used as loading control. Data are means \pm SEM from three independent experiments. **B.** Statistical significance calculated by Student's t-test (Prism5 software, GraphPad, San Diego, CA, USA).

A

	Ctr	RPM	Ctr + Trolox	RPM + Trolox
β1 integrin/ GAPDH	0.70 \pm 0.11	2.2 \pm 0.40	0.59 \pm 0.12	0.6 \pm 0.06
β actin/ GAPDH	0.85 \pm 0.1	1.6 \pm 0.15	0.71 \pm 0.11	0.95 \pm 0.12

B

Sample comparison ($\beta 1$ integrin/GAPDH)	24 h	Sample comparison (β actin/GAPDH)	24 h
Ctr vs RPM	*p< 0.05	Ctr vs RPM	*p< 0.05
Ctr+Trolox vs RPM+Trolox	p = 0.944	Ctr+Trolox vs RPM+Trolox	p = 0.214

Tables S11A, B, C, D, E and F. A. Cell Proliferation. Data are expressed as live-cell number and are means \pm SEM from three independent experiments (each containing three repetitions). **B.** Statistical significance in live cell number calculated by Student's t-test (Prism5 software, GraphPad, San Diego, CA, USA). **C.** Dead cell number expressed as means \pm SEM from three independent experiments (each containing three repetitions). **D.** Statistical significance in dead cell number calculated by Student's t-test (Prism5 software, GraphPad, San Diego, CA, USA). **E.** Dead cell percentage expressed as means \pm SEM from three independent experiments (each containing three repetitions). **F.** Statistical significance in percentage of dead cell calculated by Student's t-test (Prism5 software, GraphPad, San Diego, CA, USA).

A

Time	Ctr	Ctr + DMSO	Ctr + Trolox	RPM	RPM + DMSO	RPM + Trolox
24 h	740000 \pm 140000	728000 \pm 117000	725000 \pm 25000	627000 \pm 12800	653000 \pm 91000	775000 \pm 33000
48 h	1262000 \pm 87500	1211000 \pm 65000	1150000 \pm 100000	925000 \pm 75000	917000 \pm 32000	1163000 \pm 112000
72 h	1491400 \pm 120000	1513000 \pm 97000	1612500 \pm 62500	1095000 \pm 95000	990000 \pm 105000	1522000 \pm 27500
96 h	1530000 \pm 93000	1589000 \pm 99100	1597000 \pm 75000	1150000 \pm 85000	1203000 \pm 117000	1562000 \pm 112500

B

Sample comparison	24 h	48 h	72 h	96 h
Ctr vs RPM	p = 0.583	*p< 0.05	*p< 0.05	*p< 0.05
Ctr+DMSO vs RPM+DMSO	p = 0.640	*p< 0.05	*p< 0.05	*p< 0.05
Ctr+Trolox vs RPM+Trolox	p = 0.294	p = 0.935	p = 0.256	p = 0.809
Ctr+DMSO vs Ctr+Trolox	p = 0.981	p = 0.636	p = 0.437	p = 0.952
RPM+DMSO vs RPM+Trolox	p = 0.276	*p< 0.05	*p< 0.05	*p< 0.05

C

Time	Ctr	Ctr + DMSO	Ctr + Trolox	RPM	RPM + DMSO	RPM + Trolox
24 h	22200 \pm 1110	21840 \pm 1092	21750 \pm 1050	19810 \pm 2100	20896 \pm 1940	24800 \pm 1550
48 h	44170 \pm 2325	42333 \pm 2900	41959 \pm 3150	29600 \pm 2850	29934 \pm 1467	39316 \pm 2900
72 h	59656 \pm 2889	63546 \pm 3890	64500 \pm 2955	43800 \pm 2500	41580 \pm 2900	60500 \pm 3157
96 h	61200 \pm 2448	65540 \pm 3570	63888 \pm 2194	46000 \pm 2350	48120 \pm 2110	62580 \pm 3126

D

Sample comparison	24 h	48 h	72 h	96 h
Ctr vs RPM	p = 0.371	*p< 0.05	*p< 0.05	*p< 0.05
Ctr+DMSO vs RPM+DMSO	p = 0.693	*p< 0.05	*p< 0.05	*p< 0.05
Ctr+Trolox vs RPM+Trolox	p = 0.179	p = 0.571	p = 0.407	p = 0.749
Ctr+DMSO vs Ctr+Trolox	p = 0.955	p = 0.935	p = 0.855	p = 0.714
RPM+DMSO vs RPM+Trolox	p = 0.191	*p< 0.05	*p< 0.05	*p< 0.05

E

Time	Ctr	Ctr + DMSO	Ctr + Trolox	RPM	RPM + DMSO	RPM + Trolox
24 h	2.91 \pm 0.14	2.91 \pm 0.15	2.91 \pm 0.14	3.06 \pm 0.32	3.10 \pm 0.28	3.10 \pm 0.19
48 h	3.38 \pm 0.18	3.38 \pm 0.23	3.52 \pm 0.26	3.10 \pm 0.29	3.16 \pm 0.15	3.27 \pm 0.24
72 h	3.74 \pm 0.18	4.01 \pm 0.25	3.84 \pm 0.18	3.85 \pm 0.22	4.03 \pm 0.28	3.82 \pm 0.19
96 h	3.84 \pm 0.15	3.96 \pm 0.22	3.85 \pm 0.13	3.85 \pm 0.19	3.84 \pm 0.17	3.85 \pm 0.19

F

Sample comparison	24 h	48 h	72 h	96 h
Ctr vs RPM	p = 0.689	p = 0.458	p = 0.7185	p = 0.969
Ctr+DMSO vs RPM+DMSO	p = 0.582	p = 0.468	p = 0.960	p = 0.688
Ctr+Trolox vs RPM+Trolox	p = 0.466	p = 0.519	p = 0.943	p> 0.999
Ctr+DMSO vs Ctr+Trolox	p> 0.999	p = 0.707	p = 0.610	p = 0.689
RPM+DMSO vs RPM+Trolox	p> 0.999	p = 0.717	p = 0.569	p = 0.971