

Supplemental Materials

Table S1 The dosage regimen and experimental groups.

Groups	Dosage regimen
Con group	distilled water
Vcon group	corn oil
Lyc group	5 mg/kg BW/day Lyc
D5 group	500 mg/kg BW/day DEHP
D10 group	1000 mg/kg BW/day DEHP
DL5 group	500 mg/kg BW/day DEHP + 5 mg/kg BW/day Lyc
DL10 group	1000 mg/kg BW/day DEHP + 5 mg/kg BW/day Lyc

Table S2 The primer pairs used for qRT-PCR analyses.

Gene Name	Primers	Gene Bank number
PGC-1 α	F: ATACCGCAAAGAGCACGAGAA R: CTCAAGAGCAGCGAAAGCGTCACA	NM_008904.2
NRF1	F: TATGGCGGAAGTAATGAAAGACG R: CAACGTAAGCTCTGCCTTGTT	NM_001164226
TFAM	F: AACACCCAGATGCAAAACTTTCA R: GACTTGGAGTTAGCTGCTCTTT	NM_009360.4
MFN1	F: CCTACTGCTCCTTCTAACCCA R: AGGGACGCCAATCCTGTGA	NM_024200.4
MFN2	F: CTGGGGACCGGATCTTCTTC R: CTGCCTCTCGAAATTCTGAAACT	NM_133201.3
OPA1	F: TGGAAAATGGTTCGAGAGTCAG R: CATTCCGTCTCTAGGTTAAAGCG	NM_133752.3
Drp1	F: ACCGGGAATGACCAAAGTACC R: TGGGATTACTGATGAACCGAAGA	NM_152816.3
PINK	F: GGCTTCCGTCTGGAGGATTAT R: AACCTGCCGAGATATTCCACA	NM_026880.2
Parkin	F: GGTCTACAGACAGGGCAATA R: CTGGCCTTTCCTCACACCAC	AB019558.1
SIRT1	F: TGATTGGCACCGATCCTCG R: CCACAGCGTCATATCATCCAG	NM_019812
SIRT2	F: GCGGGTATCCCTGACTTCC R: CGTGTCTATGTTCTGCGTGTAG	NM_022432
SIRT3	F: GGCTCTATACACAGAACATCGAC R: TAGCTGTTACAAAGGTCCCGT	NM_022433
SIRT4	F: GATTGACTTTCAGGCCGACAA R: GCGGCACAAATAACCCCGA	NM_001167691
SIRT5	F: CCAGTTGTGTTGTAGACGAAAGC R: TTCCGAAAGTCTGCCATATTTGA	NM_178848
SIRT6	F: CTGAGAGACACCATTCTGGACT R: GGTTGCAGGTTGACAATGACC	NM_181586
SIRT7	F: GCACTTGGTTGTCTACACGG R: TGTCCATACTCCATTAGGACCC	NM_153056
GADPH	F: CGTGCCGCCTGGAGAAACCTG R: AGAGTGGGAGTTGCTGTTGAAGTCG	XM_017321385.2
β -actin	F: GTGACGTTGACATCCGTAAAGA R: GCCGGACTCATCGTACTCC	XM_030254057.1

Table S3-1 Total variance explained of PCA

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	% of Variance Total	Total	% of Variance	% of Variance Total
1	13.029	81.433	81.433	13.029	81.433	81.433
2	2.368	14.801	96.234	2.368	14.801	96.234
3	.293	1.832	98.065			
4	.196	1.228	99.293			
5	.069	.429	99.722			
6	.044	.278	100.000			
7	5.463E-016	3.414E-015	100.000			
8	4.738E-016	2.961E-015	100.000			
9	3.907E-016	2.442E-015	100.000			
10	1.136E-016	7.099E-016	100.000			
11	2.803E-017	1.752E-016	100.000			
12	-7.085E-017	-4.428E-016	100.000			
13	-1.811E-016	-1.132E-015	100.000			
14	-2.713E-016	-1.696E-015	100.000			
15	-3.031E-016	-1.894E-015	100.000			
16	-4.319E-016	-2.699E-015	100.000			

Extraction Method: Principal Component Analysis (PCA).

Table S3-2 The component matrix of related factors.

Component matrix^a

	Component	
	1	2
SIRT1	.943	.134
SIRT2	.932	-.070
SIRT3	.991	.084
SIRT4	-.975	-.086
SIRT5	-.858	.454
SIRT6	-.948	-.175
SIRT7	.898	-.422
PGC1a	.568	.817
OPA1	.088	.985
MFN2	.967	-.197
MFN1	.984	.177
NRF1	.897	-.358
Drp1	.973	-.190
TFAM	.994	.088
Parkin	.989	.105
PINK	.974	.160

Extraction Method: Principal Component Analysis (PCA).

a. Two components have been extracted.

OPA1	Pearson correlation	.056	-.438	-.124	.082	.543	-.064	-.629	.882	1	-.358	.026	-.665	-.426	-.103	-.100	.034
	Significant (Bilateral)	.964	.711	.921	.948	.635	.959	.567	.312		.767	.983	.537	.720	.934	.936	.979
	N	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
MFN2	Pearson correlation	.912	.996	.971	-.960	-.978	-.909	.951	.124	-.358	1	.924	.935	.997*	.966	.965	.921
	Significant (Bilateral)	.269	.056	.153	.181	.132	.274	.200	.921	.767		.250	.230	.047	.167	.169	.254
	N	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
MFN1	Pearson correlation	1.000*	.887	.989	-.994	-.825	-.999*	.761	.494	.026	.924	1	.729	.893	.992	.992	1.000**
	Significant (Bilateral)	.019	.305	.096	.069	.382	.024	.449	.671	.983	.250		.480	.297	.083	.081	.005
	N	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
NRF1	Pearson correlation	.709	.963	.824	-.799	-.988	-.703	.999*	-.235	-.665	.935	.729	1	.959	.812	.810	.724
	Significant (Bilateral)	.499	.174	.384	.411	.098	.504	.030	.849	.537	.230	.480		.183	.397	.399	.484
	N	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Drp1	Pearson correlation	.880	1.000**	.951	-.937	-.991	-.876	.971	.050	-.426	.997*	.893	.959	1	.944	.943	.890
	Significant (Bilateral)	.316	.009	.201	.228	.085	.321	.153	.968	.720	.047	.297	.183		.214	.216	.301
	N	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
TFAM	Pearson correlation	.987	.939	1.000*	-1.000*	-.891	-.986	.838	.377	-.103	.966	.992	.812	.944	1	1.000**	.991
	Significant (Bilateral)	.101	.223	.014	.013	.299	.106	.367	.754	.934	.167	.083	.397	.214		.002	.087
	N	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Parkin	Pearson correlation	.988	.938	1.000*	-1.000*	-.890	-.987	.837	.380	-.100	.965	.992	.810	.943	1.000**	1	.991
	Significant (Bilateral)	.100	.225	.016	.012	.301	.105	.369	.752	.936	.169	.081	.399	.216	.002		.085
	N	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
PINK	Pearson correlation	1.000*	.884	.987	-.993	-.821	-1.000*	.756	.500	.034	.921	1.000**	.724	.890	.991	.991	1
	Significant (Bilateral)	.014	.310	.101	.074	.387	.019	.454	.667	.979	.254	.005	.484	.301	.087	.085	
	N	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

** . At the 0.01 level (Bilateral) significant correlation.

* . At the 0.05 level (Bilateral) significant correlation.

OPA1	Pearson correlation	.168	.166	.634	.048	-.098	.544	.452	-.395	1	.025	.572	.396	.595	.158	.737	.234
	Significant (Bilateral)	.832	.834	.366	.952	.902	.456	.548	.605		.975	.428	.604	.405	.842	.263	.766
	N	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
MFN2	Pearson correlation	.564	.803	.721	-.421	.318	.704	.902	-.734	.025	1	.042	.460	-.208	-.287	.658	-.618
	Significant (Bilateral)	.436	.197	.279	.579	.682	.296	.098	.266	.975		.958	.540	.792	.713	.342	.382
	N	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
MFN1	Pearson correlation	.777	-.356	.642	-.726	-.820	-.061	.320	-.710	.572	.042	1	.895	.967*	.856	.620	.727
	Significant (Bilateral)	.223	.644	.358	.274	.180	.939	.680	.290	.428	.958		.105	.033	.144	.380	.273
	N	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
NRF1	Pearson correlation	.968*	-.038	.822	-.896	-.649	.143	.615	-.935	.396	.460	.895	1	.753	.687	.755	.409
	Significant (Bilateral)	.032	.962	.178	.104	.351	.857	.385	.065	.604	.540	.105		.247	.313	.245	.591
	N	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Drp1	Pearson correlation	.601	-.526	.464	-.576	-.858	-.199	.105	-.510	.595	-.208	.967*	.753	1	.888	.466	.854
	Significant (Bilateral)	.399	.474	.536	.424	.142	.801	.895	.490	.405	.792	.033	.247		.112	.534	.146
	N	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
TFAM	Pearson correlation	.629	-.752	.193	-.723	-.998**	-.565	-.146	-.385	.158	-.287	.856	.687	.888	1	.138	.922
	Significant (Bilateral)	.371	.248	.807	.277	.002	.435	.854	.615	.842	.713	.144	.313	.112		.862	.078
	N	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Parkin	Pearson correlation	.660	.505	.988*	-.434	-.075	.737	.912	-.879	.737	.658	.620	.755	.466	.138	1	-.062
	Significant (Bilateral)	.340	.495	.012	.566	.925	.263	.088	.121	.263	.342	.380	.245	.534	.862		.938
	N	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
PINK	Pearson correlation	.295	-.891	-.056	-.400	-.925	-.659	-.417	-.062	.234	-.618	.727	.409	.854	.922	-.062	1
	Significant (Bilateral)	.705	.109	.944	.600	.075	.341	.583	.938	.766	.382	.273	.591	.146	.078	.938	
	N	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

** . At the 0.01 level (Bilateral) significant correlation.

* . At the 0.05 level (Bilateral) significant correlation.

