Supplementary material for:

Pharmacological Stimulation of Nuclear Factor (Erythroid-derived 2)-like 2

Translation Activates Antioxidant Responses

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Supplementary Table 1. Luc2-Nrf2Sg3 expression change after treatment with 84 compounds from the Redox Library.

ID	Compound Name	Fold Change	Z score	ID	Compound Name	Fold Change	Z score
1	Promethazine·HCl	1.53	0.70	43	BHT	0.40	-0.45
2	Cumene hydroperoxide	1.24	0.41	44	BHA	0.60	-0.25
3	β-Lapachone	0.45	-0.40	45	Bakuchiol	0.24	-0.62
4	**Resveratrol**	**4.29**	**3.51**	46	DL-α-Lipoic acid	0.63	-0.21
5	Hydroquinone	1.27	0.44	47	Eugenol	0.90	0.06
6	TEMPOL	1.08	0.24	48	Melatonin	0.69	-0.15
7	Ferulic acid ethylester	1.28	0.45	49	N-Acetyl-Cysteine	0.58	-0.27
8	D-α-Tocopherylquinone	1.14	0.30	50	D-γ-Tocopherol	0.71	-0.14
9	Seratrodast	0.91	0.07	51	Tocopherol succinate	0.75	-0.10
10	Idebenone	0.80	-0.04	52	Ascorbic acid	0.45	-0.40
11	tert-Butylhydroquinone	1.27	0.43	53	Ascorbyl palmitate	0.47	-0.38
12	HBED·HCl·H2O	1.06	0.22	54	n-Octyl caffeate	0.15	-0.71
13	Ambroxol	0.71	-0.14	55	Paeonol	0.65	-0.19
14	L-Ergothioneine	0.85	0.01	56	Protocatechuic acid	0.56	-0.29
15	Hinokitiol	0.59	-0.25	57	Glutathione	0.53	-0.32
16	Epigallocatechin gallate	0.92	0.08	58	Carvedilol	0.41	-0.44
17	Procysteine	0.55	-0.30	59	Diludin	0.57	-0.28
18	Trolox	0.85	0.00	60	Carnosic acid	0.68	-0.17
19	MCI-186	0.75	-0.09	61	Tanshinone IIA	0.64	-0.21
20	U83836E·2HCl	0.37	-0.48	62	Probucol	0.58	-0.26
21	U74389G maleate	0.54	-0.31	63	EPA	0.51	-0.34
22	GERI-BP002A	0.15	-0.71	64	DCHA	0.56	-0.29
23	**Apigenin**	**7.64**	**6.92**	65	bis-demethoxycurcumin	0.19	-0.66
24	Terbinafine·HCl	0.66	-0.19	66	Ibuproxam	0.51	-0.33
25	Rosmarinic acid	1.16	0.32	67	Ciclopirox ethanolamine	0.55	-0.30
26	**Piceatannol**	**4.26**	**3.48**	68	Thymoquinone	0.58	-0.26
27	AA-861	0.40	-0.45	69	Thiourea	0.74	-0.10
28	CDC	0.39	-0.45	70	DTT	0.72	-0.13
29	Ebselen	0.27	-0.58	71	N-Ethylmaleimide	0.90	0.06
30	Genistein	0.57	-0.28	72	Buthionine sulfoximine	1.35	0.52
31	Curcumin	0.19	-0.66	73	Anethole trithione	1.36	0.53
32	Phenidone	0.79	-0.05	74	TEMPO	0.71	-0.13
33	Gossypol	0.11	-0.74	75	D609	0.57	-0.28
34	Gentisic acid	0.54	-0.30	76	Captopril	0.68	-0.16
35	Caffeic acid	0.71	-0.13	77	Disulfiram	0.32	-0.53
36	Baicalein	1.45	0.62	78	1,2-Dithiole-3-thione	0.51	-0.34
37	Esculetin	0.77	-0.07	79	Selenomethionine	0.44	-0.41
38	N-Propyl gallate	0.52	-0.32	80	Tetramethylpyrazine	0.55	-0.30
39	ETYA	0.60	-0.25	81	Ethoxyquin	0.47	-0.38
40	CAPE	1.17	0.33	82	Canthaxanthin	0.44	-0.41
41	NDGA	0.48	-0.37	83	β-carotene	0.56	-0.28
42	Capsaicin	0.49	-0.36	84	Retinyl palmitate	0.54	-0.31

The *fold change* in expression was calculated against the basal expression of Luc2-Nrf2Sg3 in cells treated with DMSO only as a negative control. The *Z score* is the number of standard deviations from the mean for each readout value. (n=3)

Supplementary Table 2. Luciferase alone expression change after treatment with 84 compounds from the Redox Library.

ID	Compound Name	Fold Change	Z score	ID	Compound Name	Fold Change	Z score
1	Promethazine·HCl	1.22	0.07	43	BHT	1.41	0.80
2	Cumene hydroperoxide	1.14	-0.23	44	BHA	1.19	-0.02
3	β-Lapachone	0.01	-4.47	45	Bakuchiol	1.00	-0.74
4	Resveratrol	1.53	1.24	46	DL-α-Lipoic acid	1.04	-0.57
5	Hydroquinone	1.30	0.37	47	Eugenol	1.28	0.31
6	TEMPOL	1.21	0.06	48	Melatonin	1.19	-0.01
7	Ferulic acid ethylester	1.42	0.83	49	N-Acetyl-Cysteine	1.16	-0.15
8	D-α-Tocopherylquinone	1.14	-0.23	50	D-γ-Tocopherol	1.41	0.78
9	Seratrodast	1.13	-0.25	51	Tocopherol succinate	1.19	-0.04
10	Idebenone	0.94	-0.96	52	Ascorbic acid	1.34	0.55
11	tert-Butylhydroquinone	0.95	-0.91	53	Ascorbyl palmitate	1.00	-0.74
12	HBED·HCl·H2O	1.07	-0.49	54	n-Octyl caffeate	1.12	-0.30
13	Ambroxol	1.15	-0.19	55	Paeonol	1.38	0.67
14	L-Ergothioneine	1.27	0.26	56	Protocatechuic acid	1.21	0.04
15	Hinokitiol	1.16	-0.15	57	Glutathione	1.25	0.20
16	Epigallocatechin gallate	1.32	0.46	58	Carvedilol	1.06	-0.52
17	Procysteine	1.13	-0.26	59	Diludin	1.33	0.51
18	Trolox	1.06	-0.52	60	Carnosic acid	0.80	-1.48
19	MCI-186	1.06	-0.52	61	Tanshinone IIA	1.35	0.57
20	U83836E·2HCl	1.18	-0.06	62	Probucol	1.29	0.34
21	U74389G maleate	1.21	0.03	63	EPA	1.35	0.56
22	GERI-BP002A	1.03	-0.63	64	DCHA	1.07	-0.49
23	Apigenin	1.41	0.80	65	bis-demethoxycurcumin	0.40	-2.99
24	Terbinafine·HCl	1.10	-0.36	66	Ibuproxam	1.40	0.74
25	Rosmarinic acid	1.55	1.32	67	Ciclopirox ethanolamine	1.29	0.34
26	Piceatannol	1.66	1.74	68	Thymoquinone	1.10	-0.38
27	AA-861	1.25	0.21	69	Thiourea	1.23	0.11
28	CDC	1.57	1.40	70	DTT	1.14	-0.22
29	Ebselen	1.36	0.61	71	N-Ethylmaleimide	0.97	-0.87
30	Genistein	1.46	0.98	72	Buthionine sulfoximine	1.17	-0.09
31	Curcumin	1.01	-0.70	73	Anethole trithione	1.41	0.79
32	Phenidone	1.27	0.26	74	TEMPO	1.32	0.46
33	Gossypol	0.34	-3.21	75	D609	1.07	-0.48
34	Gentisic acid	1.13	-0.24	76	Captopril	0.98	-0.82
35	Caffeic acid	1.26	0.24	77	Disulfiram	1.07	-0.47
36	Baicalein	1.45	0.95	78	1,2-Dithiole-3-thione	1.08	-0.43
37	Esculetin	1.34	0.52	79	Selenomethionine	1.21	0.04
38	N-Propyl gallate	1.47	1.03	80	Tetramethylpyrazine	1.24	0.17
39	ETYA	1.40	0.74	81	Ethoxyquin	1.24	0.17
40	CAPE	2.15	3.59	82	Canthaxanthin	1.06	-0.51
41	NDGA	1.30	0.37	83	β-carotene	1.44	0.91
42	Capsaicin	1.20	0.01	84	Retinyl palmitate	1.09	-0.41

The *fold change* in expression was calculated against the basal expression of the Luc2 gene in cells treated with DMSO only as a negative control. The *Z score* is the number of standard deviations from the mean for each readout value. (n=3)