Supplementary information

Supplementary Table S1 Agents used in this study

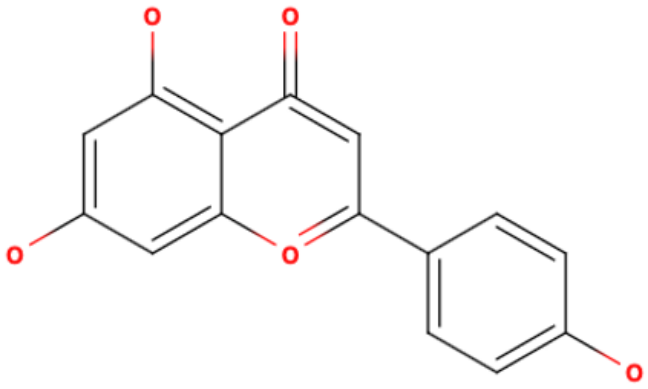
	#CAS	stock sol'n.	working sol'n.	solvent	manufacturer
FG1 (Fraglide-1, 5H4PB)	78920-11-3	1M	1~1000μM	DMSO	in house
FICZ (6-Formylindolo[3,2-*b*]carbazole)	172922-91-7	7mM	1~1000nM	DMSO	ChemScene
CA (*trans*-cinnamaldehyde)	104-55-2	8M	1~1000μM	EtOH	Nacalai
I3C (indole-3-carbinol)	700-06-1	0.2M	1~700μM	EtOH	LKT LABS
SR1 (StemRegenin 1)	1227633-49-9	5mM	~200nM	DMSO	ChemScene
Resveraorol	501-36-0	100mM	1~1000μM	DMSO	FUJIFILM
ITE (2-(1′*H*-indole-3′-carbonyl)-thiazole-4-carboxylic acid methyl ester)	448906-42-1	100mM	1~1000μM	DMSO	TOCRIS
IND (indirubin)	479-41-4	40mM	1~1000μM	DMSO	Toronto Research Chemicals
Glycerol	56-81-5	1M	1~1000μM	DMSO	FUJIFILM
DMSO	67-68-5	-	-	-	Nacalai

Supplementary Table S2 Primers used in this study

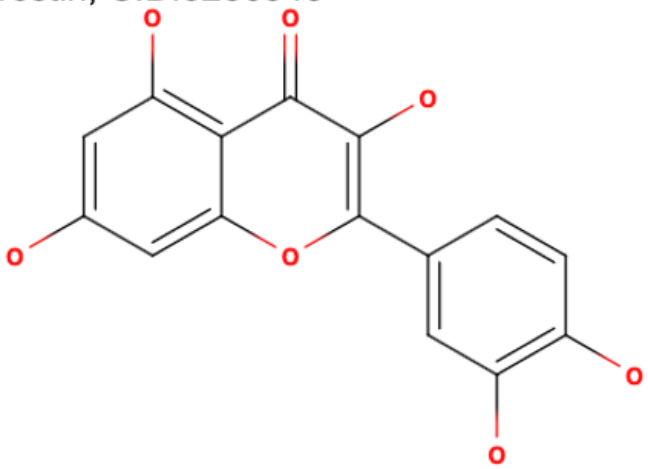
GAPDH	**Forward**	**AGCCACATCGCTCAGACAC**
	Reverse	**GCCCAATACGACCAAATCC**
Artemin (ARTN)	**Forward**	**CGCTCCTGGTGTTGATAGAGA**
	Reverse	**GCGGAGAGACCAAGTGGA**
TSLP	**Forward**	**TATCTGGTGCCCAGGCTATTCG**
	Reverse	**TGAAGCGACGCCACAATCCTTG**
AhR	**Forward**	**CAACATCACCTACGCCAGTC**
	Reverse	**GCTTGGAAGGATTTGACTTGA**
AhRR	**Forward**	**TGCTTCATCTGCCGTGTG**
	Reverse	**TTGAAACTGCATCGTCAGGA**
ARNT	**Forward**	**CGCTCCTGGTGTTGATAGAGA**
	Reverse	**GCGGAGAGACCAAGTGGA**
Nrf2 (NFE2L2)	**Forward**	**GAGACAGGTGAATTTCTCCCAAT**
	Reverse	**TTTGGGAATGTGGGCAAC**

Supplementary Fig. S1 Two-dimensional structures of the agents used in the simulation.

A Apigenin, CID:5280443

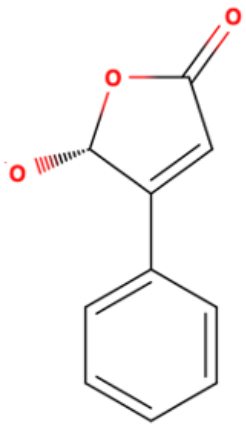


B Quercetin, CID:5280343



C FG1, CID: 12864804

FG1-1



FG1-2

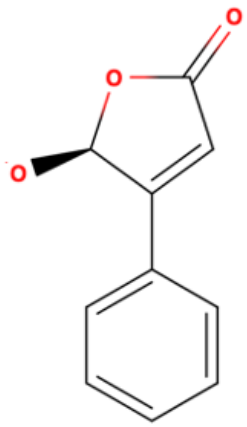


Figure S1

Supplementary Fig. S2 XRE reporter assay results and corresponding cell viability data used for the EC_{50}, IC_{50}, and LC_{50} calculations presented in Tables 1 and 2.

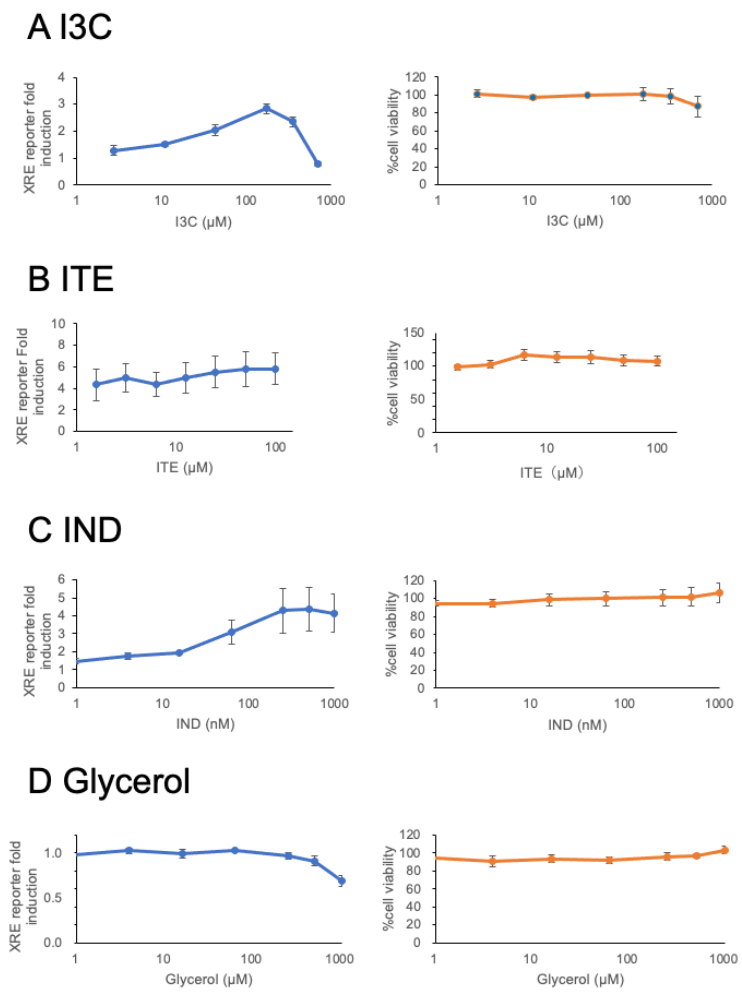


Figure S2

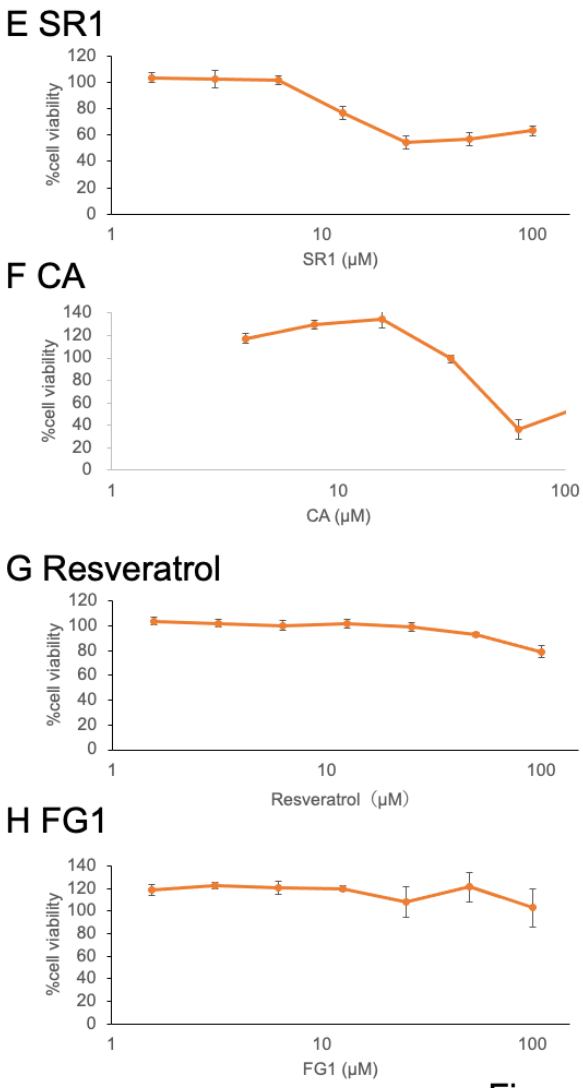


Figure S2 cont'd

The responses to the XRE activators/inhibitors and the corresponding percentages of cell viability are indicated in the figure. XRE-NLuc::HaCaT cells were treated with the indicated concentrations of the drugs for 24 hours. Luminescence was measured to monitor reporter expression, and the data are expressed as the fold changes in expression. Cells treated with vehicle or DMSO served as the 1-fold group. The error bars represent the SEMs (n=4, independent experiments; biological triplicates). The corresponding percent cell viabilities are shown, and vehicle treatment alone served as a 100% reference. The error bars represent the SEMs (n=4).

Whole western blot membranes in Figure 6b.