

Supplementary Information

A

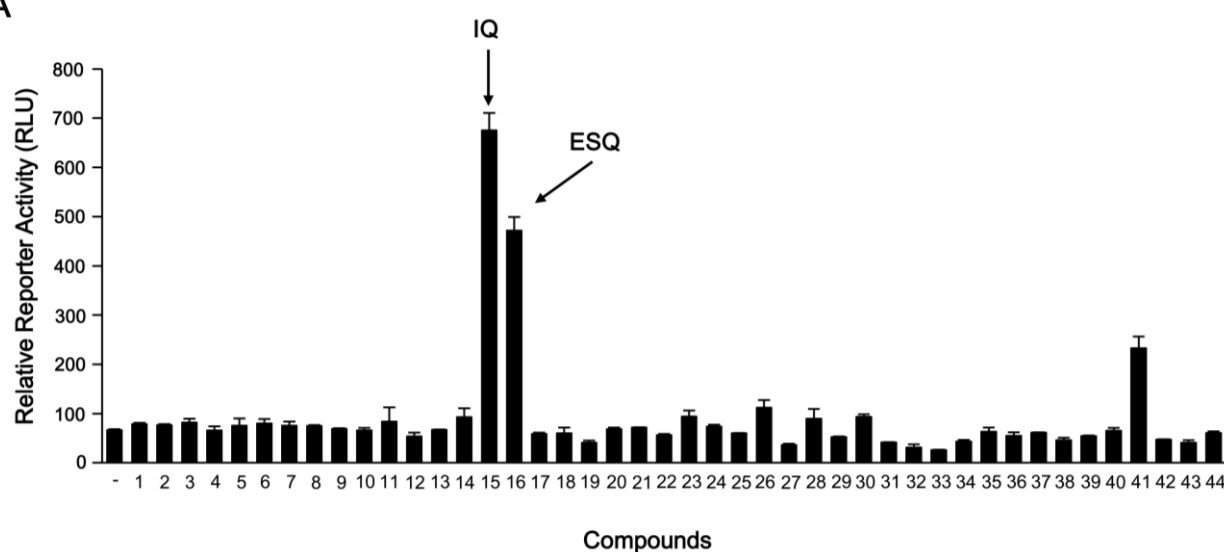
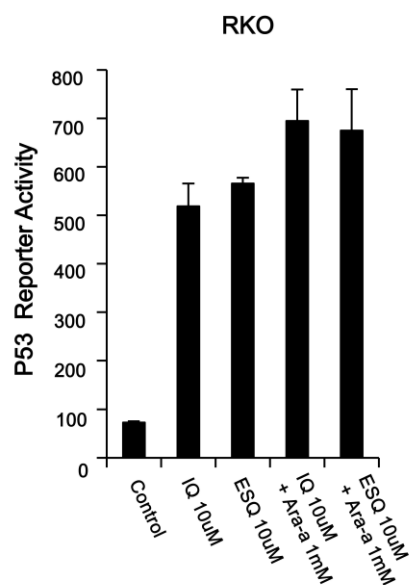


Figure S1. Screening of compounds that activate the p53 pathway. HCT116-p53 FL reporter cells were incubated with natural compounds. After 15 h, firefly luciferase activity was determined. The results represent the average of three experiments.

A



B

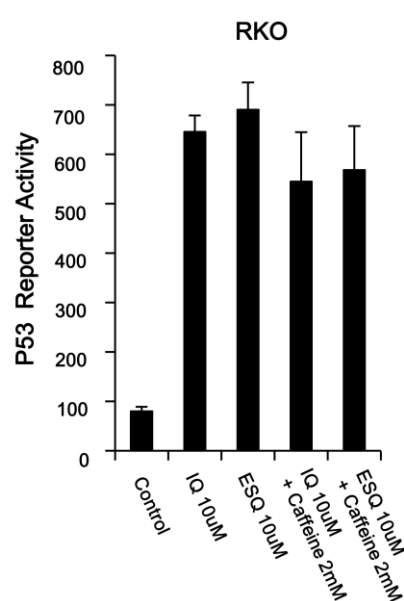


Figure S2. Pharmacological inhibitors of ATM and AMPK did not abrogate ilimaquinone- and ethylsmenoquinone-mediated p53 activation. (A,B) RKO-p53 FL reporter cells were treated with IQ (10 μ M) or ESQ (10 μ M) with or without caffeine (2 Mm) (A) or compound C (10 μ M) (B). After 15 h, firefly luciferase activity was determined. The results represent the average of three experiments. Bars indicate standard deviations.

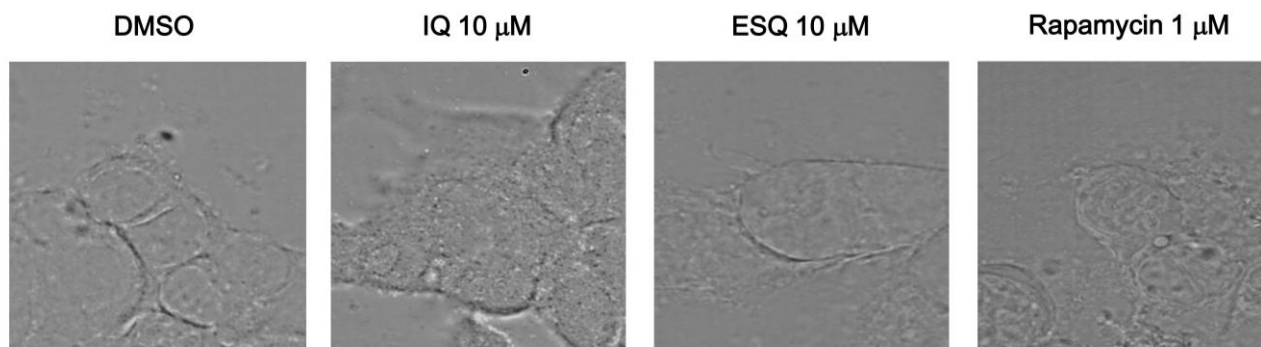


Figure S3. Representative light field images of GFP-LC3-labeled in HCT-116 cells 24 h after exposure to IQ and ESQ.

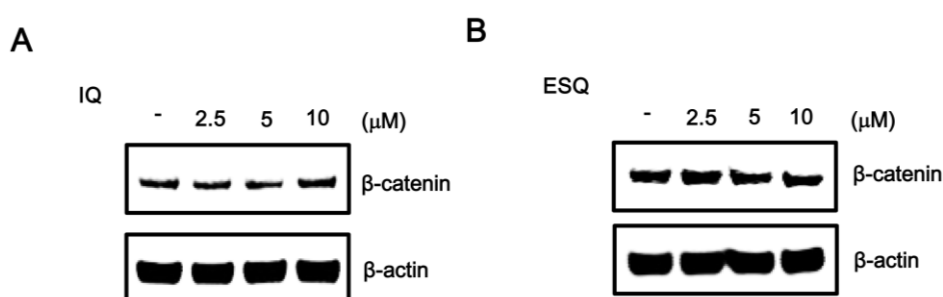


Figure S4. ilimaquinone and ethylsmenoquinone did not affect on the intracellular β -catenin level in HCT116 cells. (A,B) Cytosolic proteins were prepared from HCT116 cells treated with vehicle (DMSO) or the indicated concentrations of IQ and ESQ for 15 h before being subjected to western blotting using anti- β -catenin antibodies. The blots were re-probed with anti-actin antibodies as a loading control.

Table S1. The natural compounds used in this study.

Compound	
1	3,5-dibromo-1-hydroxy-4,4-dimethoxy-2,5-cyclohexadiene-1-acetamide
2	Aerplysinin-2
3	Aerplysinin-1
4	2-(3,5-dibromo-2-hydroxy-4-methoxyphenyl)acetic acid
5	Z-3,5-dibromo-4-ethoxy-1-hydroxy-4-methoxycyclohexa-2,5-dien-1-yl acetic acid
6	2-(3,5-dibromo-4-hydroxyphenyl)acetamide
7	3-(3-bromo-4-hydroxyphenyl)propanoic acid
8	purealidin R
9	2-(3,5-Dibromo-4,4-diethoxy-1-hydroxycyclohexa-2,5-dien-1-yl)acetamide
10	(R,S)-[3,5-dibromo-4-[(2-oxo-5-oxazolidinyl)]methoxyphenyl]-2-oxazolidinone
11	smenospongidine
12	Dactyloquinone B
13	Dactyloquinone D
14	Cyclosporgiaquinone-1
15	ilimaquinone

Table S1. *Cont.*

16	5-epi-ilimaquinone
17	(-)-Nakijinol E
18	(+)-5-epi-nakijinol E
19	Mixture of nakijinone A and 5-epi-nakijinone A
20	Thimine
21	L-thymidine
22	(-)-Dactylospongenone E
23	Mixture of 5-epi-dactylospongenone E and 5-epi-dactylospongenone F
24	Debromoaplysin
25	Debromoisolaurinterol
26	Debromolaurinterol
27	Laurinterol
28	Debromolaurinterol acetate
29	Epoxyvenustin
30	15-bromo-2,16-diacetoxyparguer-9(11)-en-7,16-diol
31	Isodictytriol
32	Aplykurodin A
33	Aplykurodin B
34	(±)-Aplysin 20
35	Desmosterol
36	Cholesterol
37	3β,5β,14α-trihydroxy cholest-7-en-6-one
38	5α,6α-Epoxycholest-8(14)-ene-3β,7α-diol
39	Cholest-7-ene-3β,5α,6β-triol
40	α-Tocopherolquinol
41	Protopine
42	Nantenine
43	Nornantenine
44	Tetrahydroberberrubine