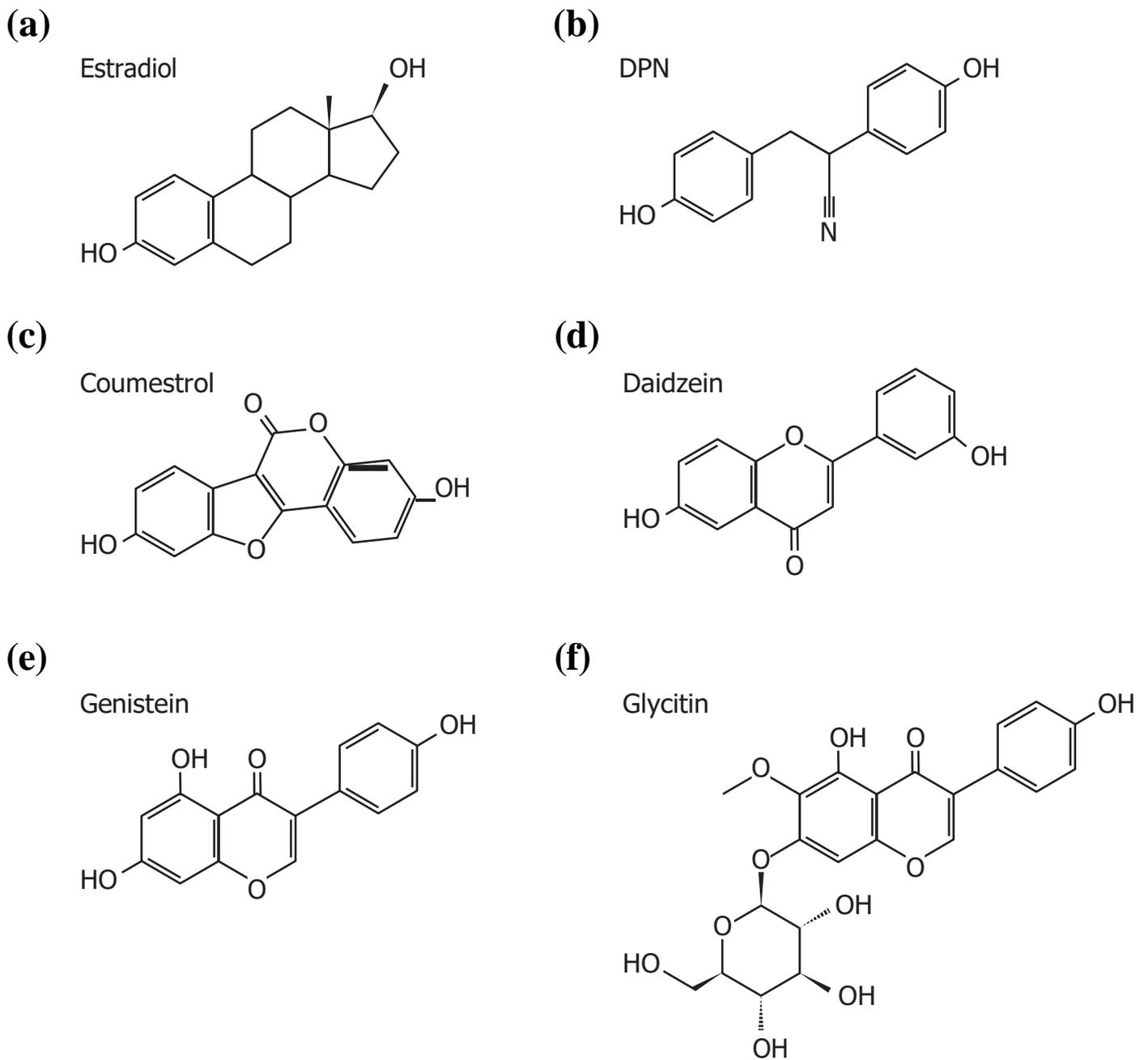
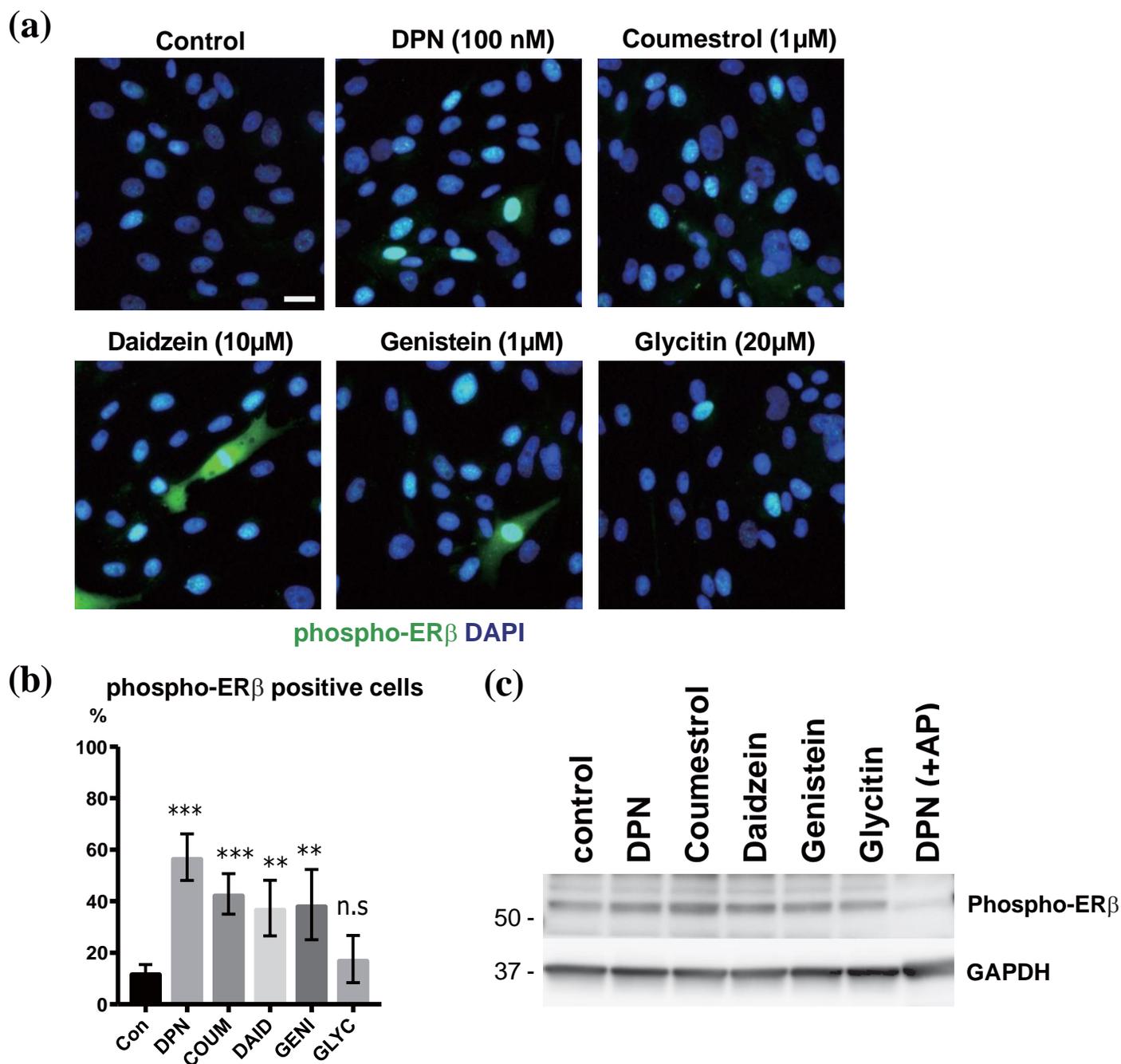


Supplementary figure S1



Supplementary figure S1 Morelucular structure of phytoestrogens that are used in this study. (a) Estradiol (E2); (b) DPN, diarylpropionitrile; (c) coumestrol;(d) daidzein; (e) genistein; (f) glycitin.

Supplementary figure S2



Supplementary figure S2 Phytoestrogens activate ER β . (a) The FTECs that were cultured for 24h in the medium containing DPN (100 nM), coumestrol (1 μ M), daidzein (10 μ M), and genistein (1 μ M) or glycitin (20 μ M). To analyze the activation of ER β , phosphorylated (phospho-) ER β was immunostained by specific antibody (green) and nucleus was counterstained with DAPI (blue). (b) The proportion of cells in which phospho-ER β is highly expressed in the nucleus is summarized in the graph. Data are presented as the mean \pm SD (n=5 fields). (c) Immunoblots for phospho-ER β and GAPDH are shown for the cells that were treated for 24h with DPN, coumestrol, daidzein, genistein or glycitin. The signals of phospho-ER β in the treatment of DPN, coumestrol, daidzein and genistein were slightly increased but not obvious because of the high basal level in bulk protein samples. As a negative control, DPN-treated cell lysate was incubated with AP. This band (the most right lane) was very weak, indicating the antibody specificity for phosphorylation. DPN, diarylpropionitrile; COUM, coumestrol; DAID, daidzein; GENI, genistein; GLYC, glycitin. SD, standard deviation; n.s., not significant, AP. alkaline phosphatase.

Supplementary Table S1

List of antibody used in this study

name	host	cat. number	Company	State, Country
anti-acetylated α -tubulin	mouse	6-11B-1	Sigma	MO, USA
anti-Pax8	rabbit	10336-1-AP	Proteintech	IL, USA
anti-Ki67	rabbit	NCK-Ki67-P	Leica	Wetzlar, Germany
anti-GAPDH	mouse	60004-1-Ig	Proteintech	IL, USA
rabbit anti-Notch1	rabbit	ab52627	Abcam	Cambridge, UK
HRP-conjugated anti-mouse IgG	goat	7076	CST	CO, USA
HRP-conjugated anti-rabbit IgG	goat	7074	CST	CO, USA
Alexa Fluor 488 conjugated anti-mouse IgG	donkey	A21202	ThermoFischer scientific	CA, USA
Alexa Fluor 568 conjugated anti-rabbit IgG	donkey	A10042	ThermoFischer scientific	CA, USA

Supplementary Table S2

List of oligonucleotide used in this study

Gene name	orientation	Sequence
DLL1	Sense	5'-GAATGGAGGGAGCTGCAC-3'
	Antisense	5'-CACTCACGCAGATCCT-3'
DLL4	Sense	5'-GTGGTGCTGGTGGTACTGTG-3'
	Antisense	5'-AGTCCGACAAGTTGTTCATGG-3'
JAG1	Sense	5'-CTCACAGCTATGCAAACACCA-3'
	Antisense	5'-CCTAAGACTGCATCACCATCTG-3'
JAG2	Sense	5'-GCCCAATCCCTGTGTGAA-3'
	Antisense	5'-GGTATTGTGCGTGCAGGTT-3'
ATP5F1	Sense	5'-CACGTGGTGCAGAGCATC-3'
	Antisense	5'-TCTTTGCGAGCAGCTTTAGA-3