

1. Cytotoxicity assays/stress genes induced

Food supplements	Active ingredients (PC in intestine)		bacterial				eucaryotic			
			<i>E. coli</i> growth inhibition (IC 50)	oxydative damage	membrane damage	cellular stress	DNA damage	Cytotoxicity in HepG2 cells (LOEC)	Cell proliferation inhibition in Caco-2 cells	Cytotoxicity (LDH release) in Caco-2 cells
St. John's wort	Hypericin	(1 - 10 µM)	76	-	-	-	-	25	20	-
	Hyperforin	(19 - 190 µM)	>19	-	-	-	-	2	2	-
Ginkgo biloba	Ginkgolide A	(0.3 - 19 µM)	/	/	/	/	/	/	-	-
	Ginkgolide B	(0.3 - 25 µM)	/	/	/	/	/	/	-	-
	Ginkgolide C	(0.8 - 7 µM)	/	/	/	/	/	/	-	-
	Ginkgolide J	(0.4 - 7 µM)	/	/	/	/	/	/	59	-
	bilobalide	(2 - 46 µM)	/	/	/	/	/	/	-	-
	Isorhamnetin	(4 - 61 µM)	/	/	/	/	/	/	32	-
	kaempferol	(5 - 66 µM)	/	/	/	/	/	/	35	-
Quercetin	(4 - 250 µM)	/	/	/	/	/	/	74	-	
Soy isoflavones	Genistein	(23 - 340 µM)	81	MerR, Soi28, Nfo	-	-	DinD	93	37	-
	Daidzein	(45 - 228 µM)	>393	-	-	-	-	>393	4	-
	Glycetein	(35 - 117 µM)	/	/	/	/	/	/	35	-
Black Radish	L-sulforaphane	(?)	183	KatG, MerR	OsmY	-	DinD	13	10	/
	DL-sulforaphane	(?)	103	KatG, MerR	OsmY	ClpB	DinD	6	10	/
	Glucoraphanin	(?)	/	/	/	/	/	/	/	/
Garlic	Garlic oil	(?)	4.4 µg/mL	KatG	OsmY	ClpB	SfiA	/	/	/
	S-allyl cysteine	(?)	/	/	/	/	/	/	/	/
	Allicin	(?)	/	/	/	/	/	/	/	/
Maca			/				/	/	/	

Legend:

units are in µM

-:

no effect

/:

not yet been tested

red number

effect at plausible concentration reaching the intestine

blue number

effect at plausible concentration reaching the intestine, calculation for liver will be performed

2. AhR pathway/CYP1A1 activity

Food supplements	Active ingredients (PC in intestine)	activation			inhibition		
		AhR in rat hepatoma cells	AhR in human hepatoma cells	CYP1A1 in intestinal model Caco-2 cells	TCDD-induced AhR in rat hepatoma cells	TCDD-induced AhR in human hepatoma cells	BaP-induced CYP1A1 activity in Caco-2 cells
St John's wort	Hypericin (1 - 10 µM)	/	/	20	/	/	2 nM
	Hyperforin (19 - 190 µM)	/	/	-	/	/	19
Ginkgo biloba	Ginkgolide A (0.3 - 19 µM)	-	-	-	-	-	-
	Ginkgolide B (0.3 - 25 µM)	-	-	-	-	-	-
	Ginkgolide C (0.8 - 7 µM)	-	-	-	-	-	-
	Ginkgolide J (0.4 - 7 µM)	24	-	-	-	-	-
	bilobalide (2 - 46 µM)	-	30	153	-	60	-
	Isorhamnetin (4 - 61 µM)	-	-	-	32	4	3
	kaempferol (5 - 66 µM)	-	-	-	-	4	3
Quercetin (4 - 250 µM)	-	20	37	40	5	3	
Soy isoflavones	Genistein (23 - 340 µM)	40	-	-	synergy "TCDD- genistein" (20)	40	46
	Daidzein (45 - 228 µM)	20	-	-	synergy "TCDD- daidzein" (20)	-	50
	Glycetein (35 - 117 µM)	35	-	-	-	-	44
Black Radish	L-sulforaphane (?)	/	/	/	/	/	/
	DL-sulforaphane (?)	/	/	/	/	/	/
	Glucoraphanin (?)	/	/	/	/	/	/
Garlic	Garlic oil (?)	/	/	/	/	/	/
	S-allyl cysteine (?)	/	/	/	/	/	/
	Allicin (?)	/	/	/	/	/	/
Maca		/	/	/	/	/	/

Legend:

units are in µM

-: no effect

/: not yet been tested

red number effect at plausible concentration reaching the intestine

blue number effect at plausible concentration reaching the intestine, calculation for liver will be performed

3. Steroid hormonal pathways (human mammary tumour cells)

Food supplements	Active ingredients (PC in intestine)	activation				inhibition			
		hAR	hPR	hGR	hER	testosterone- induced hAR	progesterone- induced hPR	dexamethasone- induced hGR	estradiol- induced hER
St John's wort	Hypericin (1 - 10 µM)	/	/	/	/	/	/	/	/
	Hyperforin (19 - 190 µM)	/	/	/	/	/	/	/	/
Ginkgo biloba	Ginkgolide A (0.3 - 19 µM)	/	-	-	-	/	-	-	-
	Ginkgolide B (0.3 - 25 µM)	/	-	-	-	/	-	-	-
	Ginkgolide C (0.8 - 7 µM)	/	-	-	-	/	-	-	-
	Ginkgolide J (0.4 - 7 µM)	/	-	-	-	/	-	-	-
	bilobalide (2 - 46 µM)	-	-	-	-	-	-	-	-
	isorhamnetin (4 - 61 µM)	-	-	-	8	-	8	-	-
	kaempferol (5 - 66 µM)	/	-	/	2	/	9	/	-
	Quercetin (4 - 250 µM)	/	-	/	20	/	20	/	-
Soy isoflavones	Genistein (23 - 340 µM)	-	-	-	0.1	-	20	40	-
	Daidzein (45 - 228 µM)	-	-	-	0.5	synergy "TCDD- Daidzein" (80)	40	80	-
	Glycetein (35 - 117 µM)	-	-	-	9	-	40	70	-
Black Radish	L-sulforaphane (?)	/	/	/	/	/	/	/	/
	DL-sulforaphane (?)	/	/	/	/	/	/	/	/
	Glucoraphanin (?)	/	/	/	/	/	/	/	/
Garlic	Garlic oil (?)	/	/	/	/	/	/	/	/
	S-allyl cysteine (?)	/	/	/	/	/	/	/	/
	Allicin (?)	/	/	/	/	/	/	/	/
Maca		/	/	/	/	/	/	/	/
		/	/	/	/	/	/	/	/
		/	/	/	/	/	/	/	/

Legend:

units are in µM

-: no effect

/: not yet been tested

green number effect at plausible concentration reaching the intestine, calculation for mammary gland (hypothesis: serum concentration) will be performed