

Table S1. Main natural phenolic inhibitors of mushroom tyrosinase.

Compound ¹	IC ₅₀ (μM) ^{2,3}
Flavonoids	
Rutin	130 [67]
Quercitrin	45 [68]
Quercetin	10.73 [69]
Galangin	3.55 [52]
Kaempferol	5.5 [54]
Isoliquiritigenin	4.85 [53]
2,2',4,4'-Tetrahydroxychalcone	0.07 [51]
Dihydromyricetin	849.88 [74]
Dihydromorin	9.4 [55]
Apigenin	17.3 [70]
Baicalein	110 [71]
Luteolin	20.8 [70]
4',7,8-Trihydroxyflavone	10.31 [72]
3'-Hydroxygenistein	15.9 [75]
Daidzein	17.50 [53]
Procyanidin B7	61.8 [59]
Procyanidin B3	56.58 [57]
Catechin	57.12 [56]
Epicatechingallate	22.63 [56]
Gallocatechingallate	61.79 [58]
Epigallocatechingallate	142.40 [56]
Cyanidin-3-O-glucoside	18.1 [76]
Liquiritigenin	22.0 [73]
Hydroxystilbenes	
Resveratrol	23 [63]
Oxyresveratrol	1.7 [55]
Dihydroxyresveratrol	0.3 [55]
Resveratrol 3-O-glucoside (piceid)	14 [60]
Resveratrol-4'-O-glucoside	29 [60]
Pterostilbene	653 [60]
Pterostilbene-4'-O-glucoside	237 [60]
Pinostilbene	594 [60]
Pinostilbene-3-O-glucoside	66 [60]
Pinostilbene-4'-O-glucoside	85 [60]
Simple phenols	
Isoeugenol	33.33[62]
Rhododendrol	245 [63]
4-Hydroxybenzylalcohol	6 [61]
Pyrogallol	772 [77]
Resorcinol	162.6 [55]
Hydroxycinnamic acid derivatives	
<i>p</i> -Coumaric acid	0.62 [66]
Caffeic acid	2.30 [66]
Rosmarinic acid	24.6 [70]
Verbascoside	324 [78]

Other common phenols	
Aloe emodin	3.39 [79]
Emodin	187.5 [80]
Shikonin	26.67 [62]
(+)-Laricilresinol	21.49 [53]
Enterolactone	124 [81]
1,2,3,6-Tetra-O-galloylglucose	0.29 [82]
1,2,3,4,6-Penta-O-galloylglucose	0.38 [82]
Phenols from <i>Artocarpus</i> species	
Artopithecin C	37.09 [83]
Artopithecin D	38.14 [83]
Morachalcone A	0.77 [83]
Artocarpin	722.5 [84]
Isobavachalcone	673.2 [84]
4',5-Dihydroxy-6,7-(2,2-dimethylpyrano)-2'-methoxy-8- γ,γ -dimethylallylflavone	720.1 [84]
Cycloheterophyllin	104.6 [84]
Norartocarpetin	0.023 [87]
Artocarpanone	2.0 [73]
Artocaepin E	6.7 [73]
Steppogenin	7.5 [73]
Artoxanthol	5.7 [85]
Alboctalol	6.4 [85]
Chlorophorin	2.5 [85]
Pyranocycloartobiloxanthone A	134 [86]
Phenols from <i>Morus</i> species	
5,5',7-Trihydroxy-2',4'-dimethoxy-6-methylflavanone	44.74 [88]
Moracin M	8.0 [55]
2,3',4-Trihydroxydihydrostilbene	0.8 [55]
Kuwanon C	76.2 [55]
Kuwanon G	67.6 [89]
Nigragenon E	21.33 [90]
Sanggenon M	13.06 [91]
Chalcomoracin	2.59 [91]
Sorocein H	6.49 [91]
Kuwanon J	0.17 [91]
Sanggenon C	1.17 [91]
Sanggenon D	1.15 [91]
Phenols isolated from different plants	
Brousoflavonol J	9.29 [92]
4'-Hydroxy-2'-methoxy-5'-(1',1'-dimethylallyl)-8-prenylpinocembrin	49.80 [93]
2',4'-Dihydroxy-5'-(1',1'-dimethylallyl)-8-prenylpinocembrin	2.32 [93]
(8-Hydroxy-3'-galactosylisoflavone)-2'-8''-(4'''-hydroxyflavone)-biflavone	192.0 [94]
2',3',5-Trihydroxy-5''-methoxy-3''-O-glucosyl-3-4'''-O-biflavone	207.7 [94]
Khrinone B	54.0 [95]
Cajanin	67.9 [95]
3'-Hydroxy-8-methoxyvestitol	67.8 [95]
3,8-Dihydroxy-9-methoxypterocarpan	16.7 [95]

Phenols from <i>Glycyrrhiza</i> species	
Glabridin	0.10 [108]
Semilicoisoflavone B	0.25 [108]
Allolicoisoflavone B	0.80 [108]
Glycybridin K	2.8 [109]
Glabrene	7.5 [109]
2',7-Dihydroxy-4'-methoxy-8-(3-methyl-2-butenyl)isoflavanone	5.1 [109]
Glyasperin D	0.15 [110]
Glyasperin C	0.2 [110]
Liquiritin apioside	88.91 [111]
Liquiritin	171.13 [111]
Galloylpaeoniflorin	35.54 [111]
Oxypaeoniflora	82.55 [111]
Benzoyloxypaeoniflorin	40.44 [111]
Mudanpioside C	82.72 [111]
Phenols from <i>Opilia amentacea</i> and <i>Silybum marianum</i>	
5,5-Dimethoxyaricilresinol-4-O-glucopyranoside	42.1 [112]
Eleutheroside E1	28 [112]
Isosilybin A	16.7 [113]
Isosilybin B	19.8 [113]
Silydianin	16.5 [113]
2,3-Dehydrosilychristin A	35.9 [113]
Silychristin A	28.8 [113]
Silybin	12.1 [113]
Phenols from <i>Syzygium polyanthum</i> and <i>Humulus lupulus</i>	
1-(2,3,5-Trihydroxy-4-methylphenyl)hexane-1-one	291.34 [114]
1-(2,3,5-Trihydroxy-4-methylphenyl)octane-1-one	616.31 [114]
(4E)-1-(2,3,5-Trihydroxy-4-methylphenyl)dec-4-en-1-one	488.65 [114]
Xanthohumol	31.1 [115]
4'-O-Methylxanthohumol	70.5 [115]
Xanthohumol C	41.3 [115]
Flavokawain C	106.7 [115]
6-Prenylnaringenin	77.2 [115]
Xanthohumol B	46.7 [115]
Isoxanthohumol	157.4 [115]
Phenols from <i>Breynia</i> and <i>Oryza sativa</i> species	
Seguinose A <i>p</i> -coumarate	16.9 [116]
Butyl <i>p</i> -coumarate	75.4 [116]
Methyl <i>p</i> -coumarate	143.6 [116]
Robustaside A	69.1 [116]
Glucopyranose-1,6-di-O- <i>p</i> -coumaroyl ester	156.6 [116]
3-Acetyl-7-methoxyepicatechin-5-O-(6-isobutanoyl)glucopyranoside	770 [118]
3-Acetyl-7-methoxyepicatechin-5-O-[6-(2-methoxybutanoyl)]glucopyranoside	750 [118]
3,6-Diferuloyl-3',6'-diacetylsucrose	47.33 [117]
Smilaside A	45.13 [117]

Phenols from <i>Aquilaria</i> and <i>Cassia tora</i> species	
6-Hydroxy-7-methoxy-2-[2-(3-hydroxy-4-methoxyphenyl)ethyl]chromone	89.0 [120]
6,8-dihydroxy-2-[2-(4-methoxyphenyl)ethyl]chromone	51.5 [120]
5,6-Dihydroxy-2-(2-phenylethyl)chromone	172.6 [121]
Chrysoobtusin	3.0 [122]
7-Methoxyobtusifolin	7.0 [122]
Obtusifolin-2-O-glucoside	9.2 [122]
Reference compounds	
Kojic acid	6.0 [9]
β -Arbutin	40 [9]

¹ Chemical structures of the listed compounds are reported in Figures 3–16 of the main text. ² Values refer to the diphenolase activity of the enzyme. ³ Reference numbers refer to the main text.