

Supplementary Materials:

Labdane-type Diterpenes, Galangalditerpenes A–C, with Melanogenesis Inhibitory Activity from the Fruit of *Alpinia galanga*

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Table S1. Effects on activity of tyrosinase from mushroom.

Treatment	Inhibition (%)					
	Substrate: L-Tyrosine			Substrate: L-DOPA		
	0 μ M	10 μ M	100 μ M	0 μ M	10 μ M	100 μ M
Galangalditerpene A (1)	0.0 \pm 2.7	5.2 \pm 2.1	27.8 \pm 2.1 **	0.0 \pm 3.3	4.6 \pm 1.0	9.2 \pm 1.2 *
Galangalditerpene B (2)	0.0 \pm 2.5	−0.2 \pm 0.6	2.6 \pm 0.9	0.0 \pm 1.7	3.9 \pm 1.7	0.7 \pm 0.8
Galangalditerpene C (3)	0.0 \pm 0.8	−6.3 \pm 1.8	1.4 \pm 6.7	0.0 \pm 2.5	−5.0 \pm 0.4	−2.3 \pm 1.0
Clovane-2 β ,9 α -diol (4)	0.0 \pm 1.6	1.2 \pm 3.7	8.2 \pm 1.6	0.0 \pm 1.3	0.8 \pm 1.5	−5.8 \pm 1.2 *
Caryolane-1,9 β -diol (5)	0.0 \pm 1.4	5.4 \pm 1.0 *	3.6 \pm 1.6	0.0 \pm 2.9	10.7 \pm 3.0 *	14.7 \pm 1.5 **
(−)-2-Oxoisodauc-5-en-12-al (6)	0.0 \pm 1.1	−2.4 \pm 1.1	−1.0 \pm 1.4	0.0 \pm 3.9	1.8 \pm 2.0	0.7 \pm 1.8
Kobusone (7)	0.0 \pm 0.5	1.2 \pm 1.7	0.7 \pm 1.5	0.0 \pm 1.2	−10.1 \pm 2.2 *	−12.5 \pm 2.5 **
Galanolactone (8)	0.0 \pm 1.3	2.3 \pm 1.5	6.6 \pm 1.4 *	0.0 \pm 1.9	−6.0 \pm 1.1 *	−5.9 \pm 1.0 *
(E)-15,16-Bisnorlabda-8(17),11-diene-13-one (9)	0.0 \pm 1.0	2.1 \pm 0.9	2.2 \pm 1.1	0.0 \pm 2.8	−9.7 \pm 1.5 *	−4.8 \pm 1.6
Inhibition (%)						
Substrate: L-Tyrosine						
Treatment	0 μ M	10 μ M	30 μ M	100 μ M	300 μ M	IC ₅₀ (μ M)
Kojic acid [13,24,26–29]	0.0 \pm 2.4	12.2 \pm 3.3	46.4 \pm 2.6 **	66.5 \pm 2.1 **	96.8 \pm 0.9 **	43.6
Inhibition (%)						
Substrate: L-DOPA						
Treatment	0 μ M	10 μ M	30 μ M	100 μ M	300 μ M	IC ₅₀ (μ M)
Kojic acid [13,24,26–29]	0.0 \pm 0.9	22.3 \pm 2.1 **	50.6 \pm 0.6 **	78.2 \pm 0.7 **	89.3 \pm 0.3 **	29.6

Each value represents the mean \pm S.E.M. ($n = 4$); asterisks denote significant differences from the control group, * $p < 0.05$, ** $p < 0.01$; commercial kojic acid was purchased from Nakalai Tesque Inc., (Kyoto, Japan).