

Supplementary data

Trifluhalol A suppresses allergic inflammation through dual inhibition of TAK1 and MK2 mediated by IgE and IL-33

Sim-Kyu Bong¹, No-June Park^{1,2}, Sang Heon Lee¹, Jin Woo Lee¹, Aaron Taehwan Kim³, Xiaoyong
Liu⁴, Sang Moo Kim⁵, Min Hye Yang⁶, Yong Kee Kim^{7,*}, Su-Nam Kim^{1,2,*}

¹ Natural Products Research Institute, Korea Institute of Science and Technology, 679 Saimdang-ro, Gangneung, Gangwon-do 25451, Republic of Korea.

² Division of Bio-Medical Science and Technology, KIST School, University of Science and Technology, Seoul, 02792, Republic of Korea

³ Department of Food Science, University of Massachusetts, Amherst, MA, USA

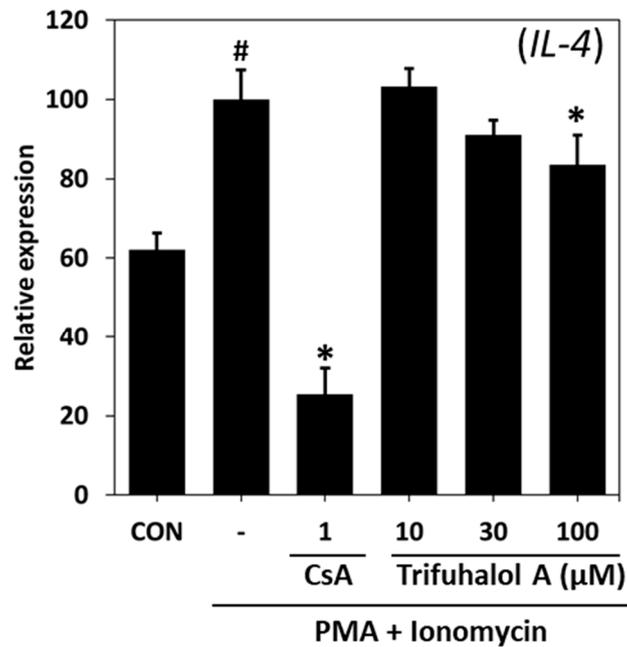
⁴ Haizhibao Deutschland GmbH, Heiliggeistgasse 28, 85354 Freising Munich, Germany.

⁵ Department of Marine Food Science and Technology, Gangneung-Wonju National University, 7 Jukheon-gil, Gangneung 25457, Republic of Korea

⁶ College of Pharmacy, Pusan National University, Busan 46241, Republic of Korea

⁷ College of Pharmacy, Sookmyung Women's University, Seoul 04310, Republic of Korea

***Corresponding author:** Yong Kee Kim, Ph.D., College of Pharmacy, Sookmyung Women's University, 100 Cheongpa-ro 47-gil, Yongsan-gu, Seoul 04610, Republic of Korea, Tel: +82-2-2077-7688, Fax: +82-2-710-9871, E-mail: yksnbk@sookmyung.ac.kr; Su-Nam Kim, Ph.D., Natural Products Research Institute, Korea Institute of Science and Technology, 679 Saimdang-ro, Gangneung, Gangwon-do 25451, Republic of Korea, Tel: +82-33-650-3503, Fax: +82-33-650-3529, E-mail: snkim@kist.re.kr



Supplementary Figure S1. Effects of trifuhalol A on IL-4 production. Representative data of qPCR analysis of IL-4 mRNA normalized to GAPDH in PMA/ionomycin (PI)-induced RBL-2H3 cells. RBL-2H3 cells were treated with trifuhalol A in combination with PMA (50 $\mu\text{g/ml}$)/ionomycin (0.1 μM) for 8 h to measure IL-4 expression. Each bar represents the mean \pm S.D. of duplicates. # $P < 0.05$ vs. control; * $P < 0.05$ vs. PI-induced group. CsA; 1 μM of cyclosporine A.