

Therapeutic Potentials of Secoiridoids from the Fruits of *Ligustrum lucidum* Aiton against Inflammation-Related Skin Diseases

Sang Won Yeon ^{1,†}, Su Ryeon Choi ^{2,†}, Qing Liu ^{3,†}, Yang Hee Jo ¹, Da Hee Choi ², Mi Ran Kim ², Se Hwan Ryu ¹, Solip Lee ¹, Bang Yeon Hwang ¹, Hyung Seo Hwang ^{2,*} and Mi Kyeong Lee ^{1,*}

¹ College of Pharmacy, Chungbuk National University, Cheongju 28160, Korea; sangwon1311@naver.com (S.W.Y.); qow0125@naver.com (Y.H.J.); alfm0188@naver.com (S.H.R.); dudaos000@hanmail.net (S.L.); byhwang@chungbuk.ac.kr (B.Y.H.)

² School of Cosmetic Science and Beauty Biotechnology, Semyung University, Jecheon 27136, Korea; tryu0925@naver.com (S.R.C.); chlekgml930@gmail.com (D.H.C.); alfks4050@naver.com (M.R.K.)

³ Food and Pharmacy College, Xuchang University, Xuchang 461000, China; liuqing7115@hotmail.com

* Correspondence: hshwang@semyung.ac.kr (H.S.H.); mkleee@chungbuk.ac.kr (M.K.L.)

† These authors contributed equally to this work.

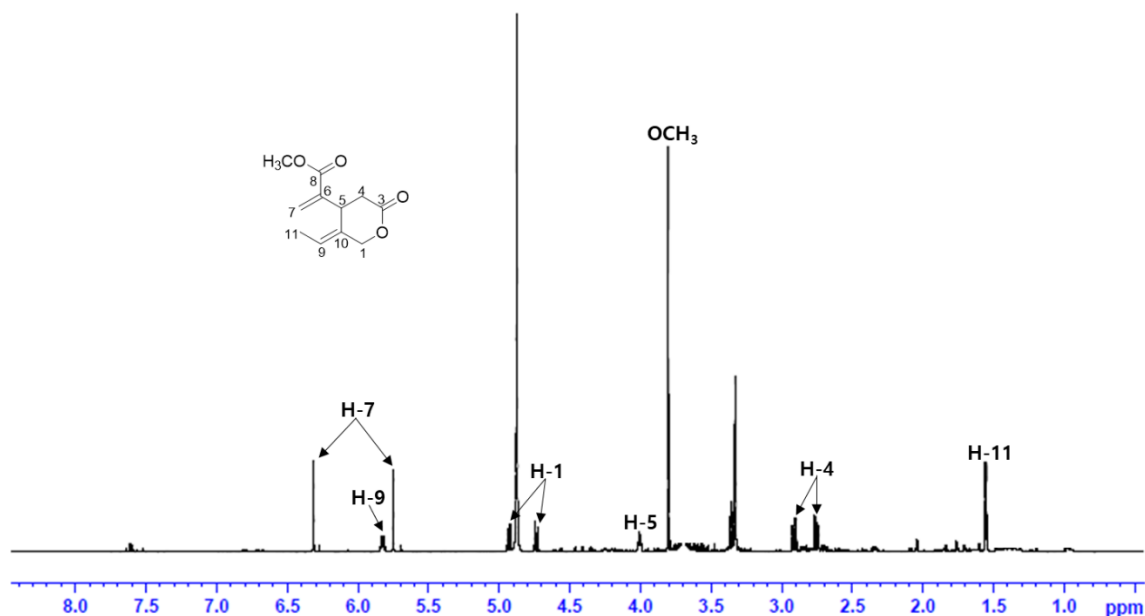


Figure S1. ¹H NMR spectrum of compound 1.

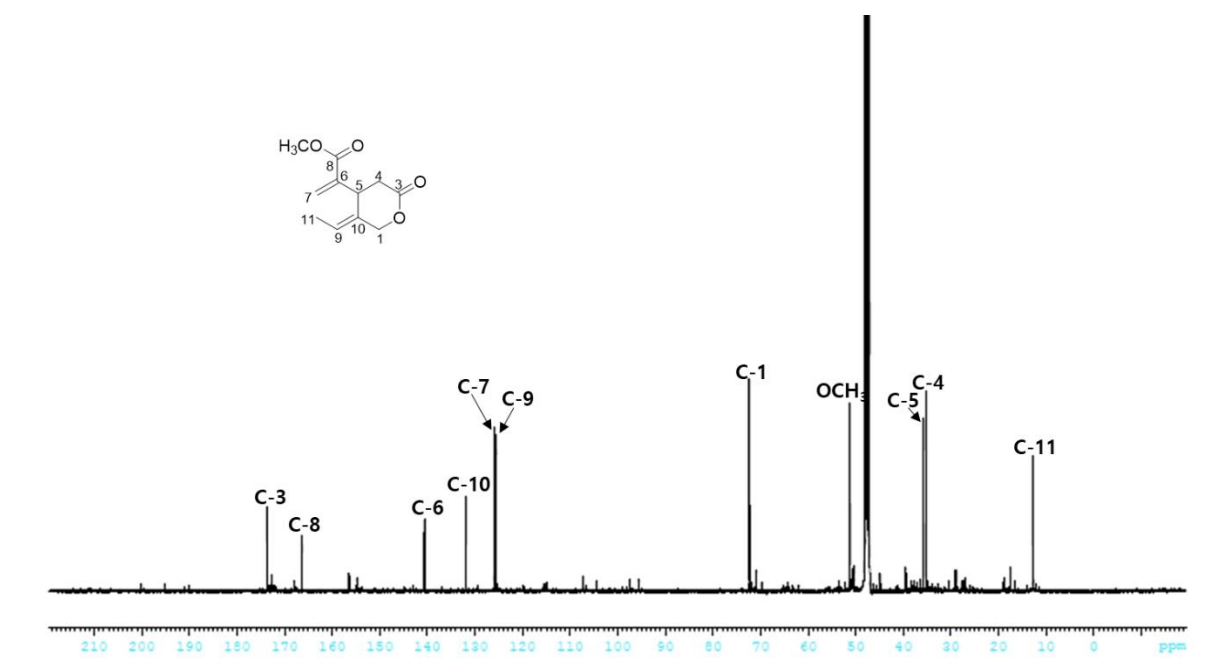


Figure S2. ^{13}C NMR spectrum of compound 1.

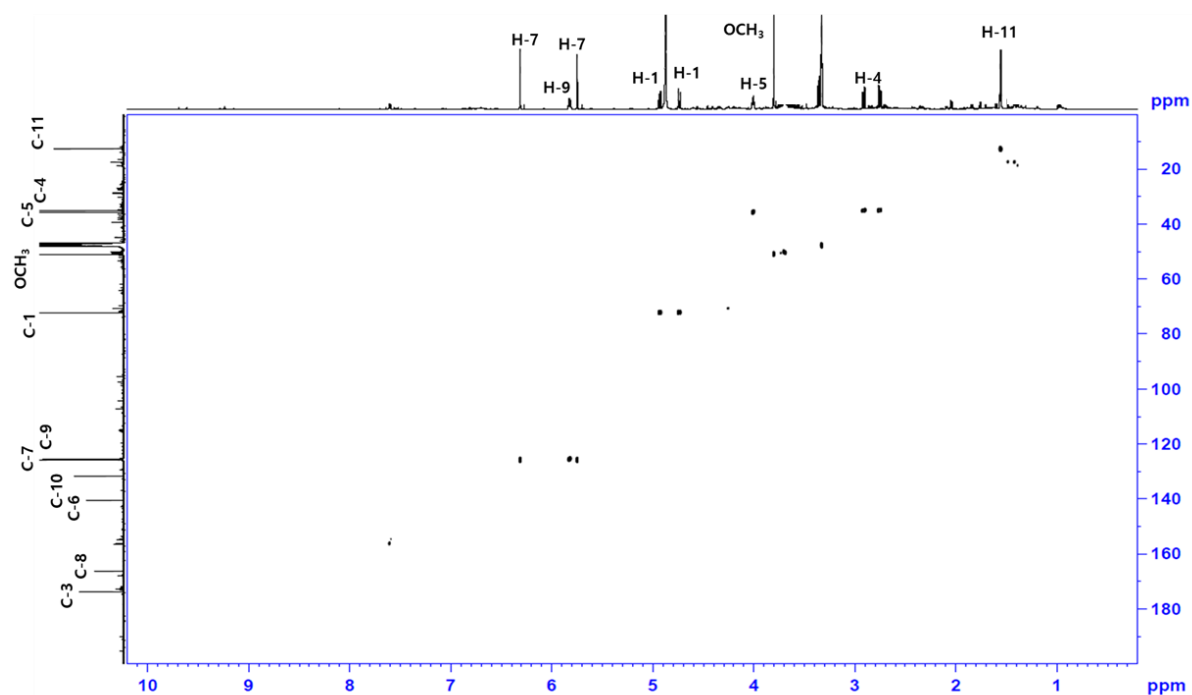


Figure S3. HSQC spectrum of compound 1.

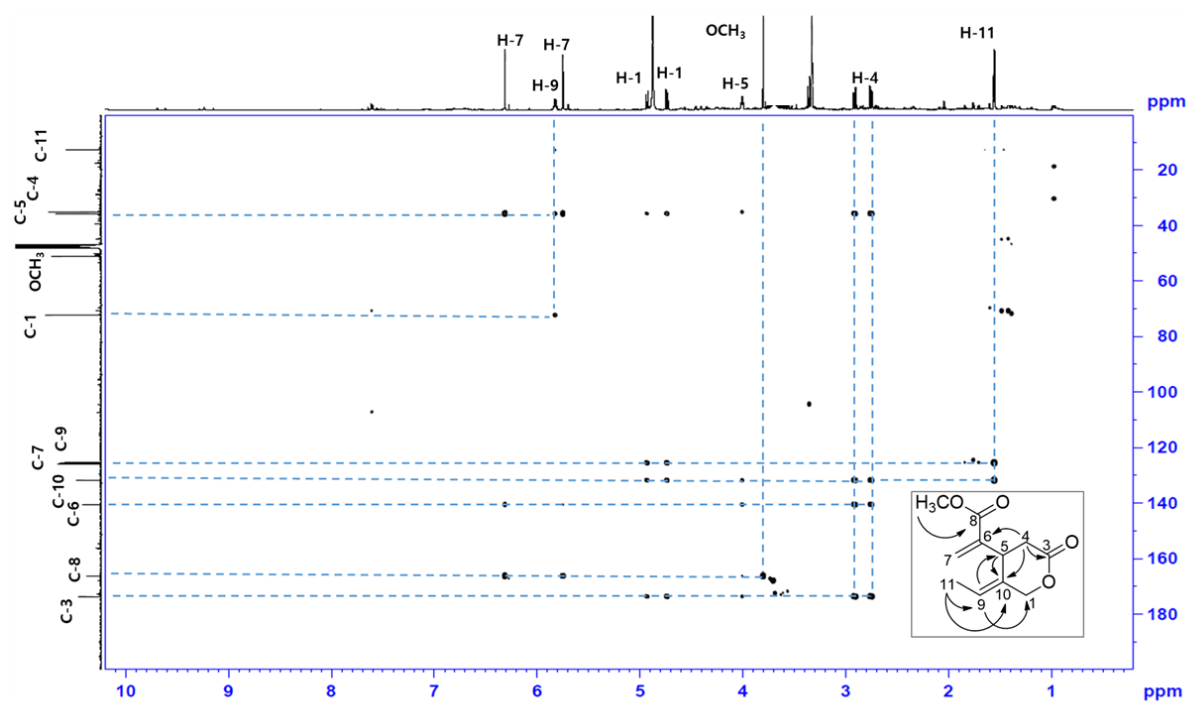


Figure S4. HMBC spectrum of compound 1.

[A]

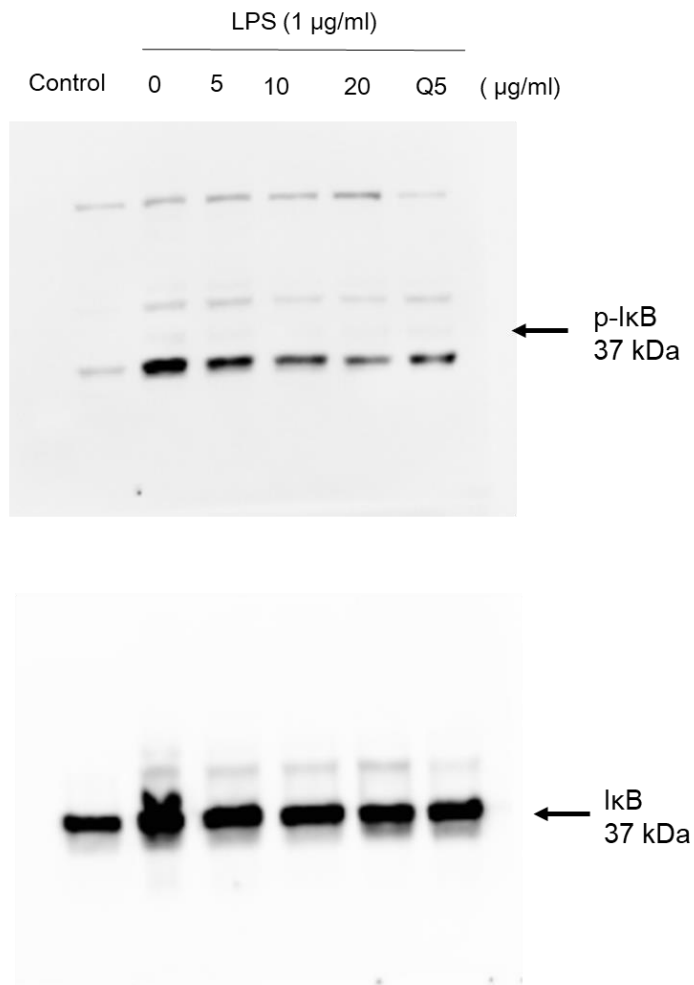


Figure S5. Western blots for the IkB phosphorylation in the NF- κ B signaling pathway in LPS induced RAW 264.7 cells (Figure 4 in the manuscript).

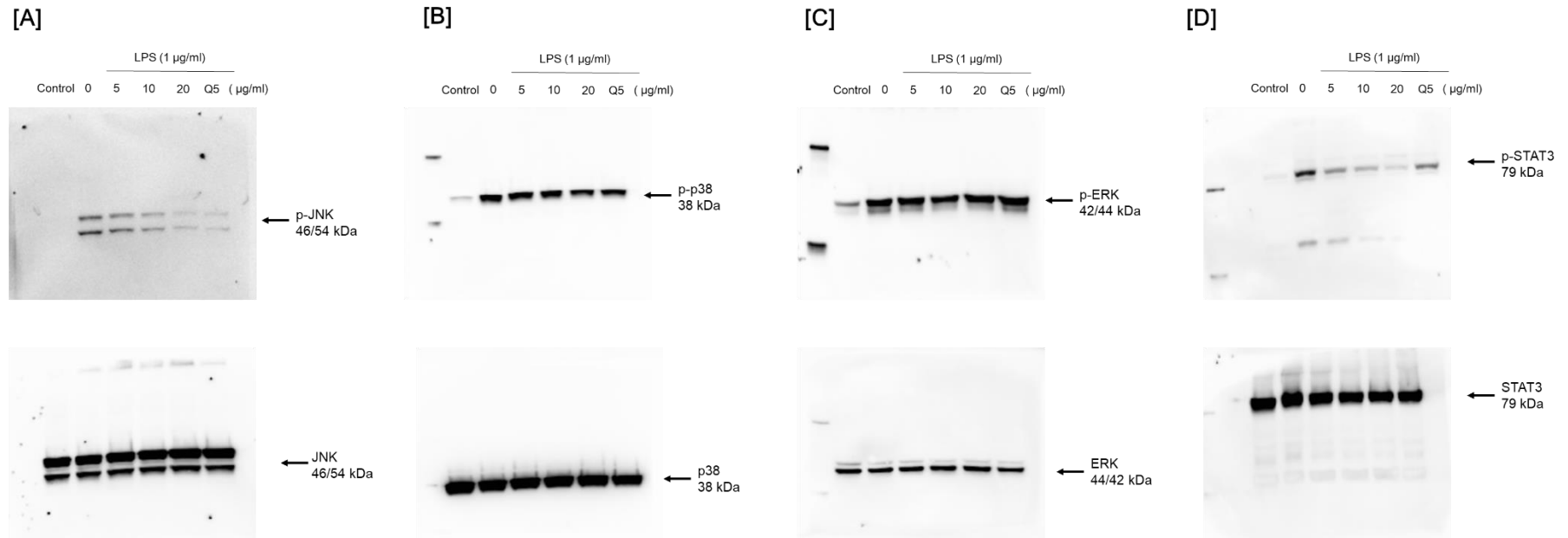


Figure S6. Western blots for the phosphorylation of MAPK and STAT3 in LPS induced RAW 264.7 cells (Figure 5 in the manuscript).

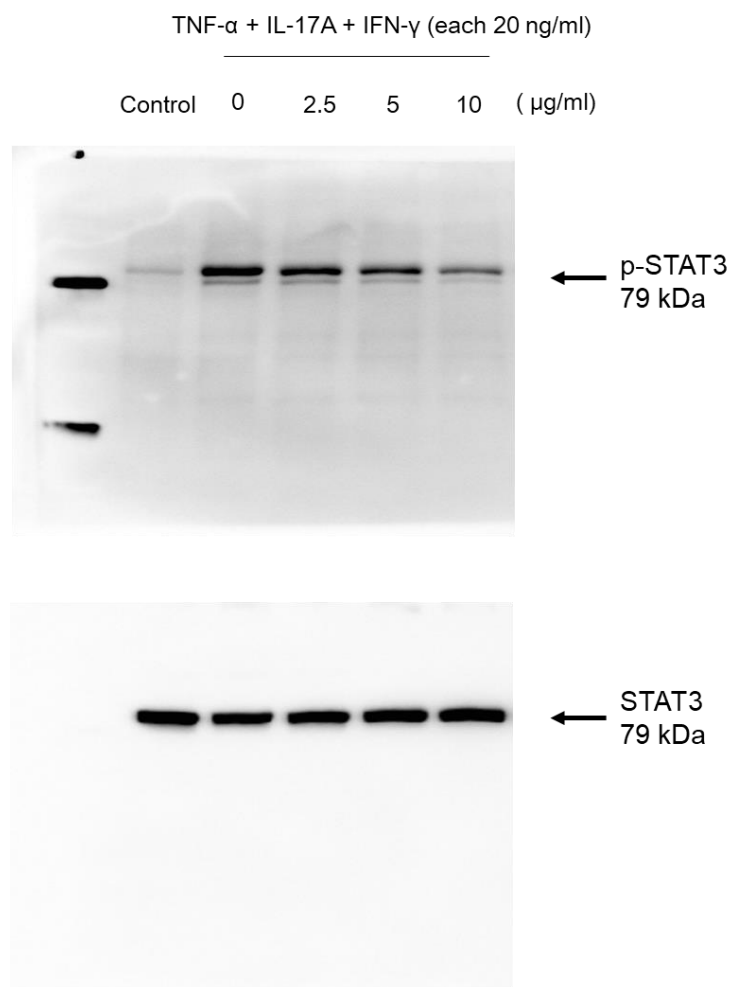


Figure S7. Western blots for the I κ B phosphorylation in the NF- κ B signaling pathway in TNF- α /IL-17A/ IFN- γ induced HaCaT cells. (Figure 6 in the manuscript).