

Anti-Inflammatory Effect of Myristic Acid through Inhibiting NF- κ B and MAPK Signaling Pathways in Lipopolysaccharide-Stimulated RAW 264.7 Macrophage Cells

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Abstract : Scope: This study is focused on the effect of myristic acid on LPS-induced inflammation in RAW 264.7 macrophage cells. Methods and results: For the experiment, RAW 264.7 mouse macrophage cell line was used. Results showed that treatment with myristic acid can attenuate LPS-induced inflammation. Moreover, myristic acid significantly suppressed expression of inflammatory mediators and down-regulating UVB-induced intracellular ROS generation. Furthermore, myristic acid reduced the expression of NF- κ B by inhibiting degradation of I κ B- α and ERK, JNK, and p38 pathways by inhibiting phosphorylation in RAW 264.7 macrophage cells. Conclusion: Overall, these data suggest that the myristic acid could reduce LPS-induced inflammation. Acknowledgment: This research was supported by the Ministry of Trade, Industry & Energy(MOTIE), Korea Institute for Advancement of Technology(KIAT) through the Encouragement Program for The Industries of Economic Cooperation Region

Keywords : anti-inflammation, myristic acid, ROS, ultraviolet light

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