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Anti-inflammatory effect of Hedgehog's skin extraction LPS-stimulated RAW 264.7 cells

Kang Hyun Leem and Myung Gyou Kim
Semyung University, Korea

The hedgehog's skin is one of the Korean medicines for hematochezia and hemorrhoids. It has been known to have the effect of calming the adverse-rising energy and stopping bleeding. This study investigated the anti-inflammatory effect of the hedgehog's skin extract on RAW 264.7 cells. 70% ethanol extracts of the hedgehog's skin were prepared and treated on LPS-stimulated RAW 264.7 cells for 24 hours. The production of nitric oxide was assayed in the culture medium of the cells and the expression of pro-inflammatory proteins such as inducible nitric oxide synthase (iNOS), cyclooxygenase-2 (COX-2), extracellular signal-regulated kinase 1/2 (ERK 1/2), phosphorylated ERK1/2, c-Jun N-terminal kinase 1/2 (JNK 1/2), and phosphorylated JNK 1/2 were detected by Western blot analyses. The extract of the hedgehog's skin suppressed LPS-induced nitric oxide productions, and it reduced the expression of COX-2 and iNOS. Also, it inhibited the phosphorylation of ERK1/2 and JNK in LPS-stimulated RAW 264.7 cells. These experiments suggest that the extract of the hedgehog's skin has an anti-inflammatory activity through the regulation of the mitogen-activated protein kinase pathway in LPS-stimulated RAW 264.7 cells.

Biography

Kang Hyun Leem is the Director of Department of Herbal Pharmacology, College of Korean Medicine, Semyung University.

heavenok@dreamwiz.com

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