

6-Acyl-4-aryl/alkyl-5,7-dihydroxycoumarins as anti-inflammatory agents

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摘要.

Abstract

A series of coumarin derivatives were synthesized in two steps from phloroglucinol. The anti-inflammatory activities of these derivatives were evaluated by means of inhibiting NO production in LPS-induced RAW 264.7 cells. Derivatives 3, 8, 10, 11, and 13 exhibited low micromolar levels of anti-inflammatory activities, and these derivatives also protected DNA against hydroxyl radical attack. Coumarin derivative 8 was the most potent derivative among those tested herein against NO production in LPS-induced RAW 264.7 cells with an IC(50) value of 7.6 microM, and it effectively reduced the hydroxyl radical production by 50% at 100 microM in the electron spin resonance study.