Morroniside cinnamic acid conjugate as an anti-inflammatory agent

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Abstract

A morroniside cinnamic acid conjugate was prepared and evaluated on E-selectin mediated cell–cell adhesion as an important role in inflammatory processes. 7-*O*-Cinnamoylmorroniside exhibited excellent anti-inflammatory activity (IC_{50} = 49.3 μM) by inhibiting the expression of E-selectin; further, it was more active than another cinnamic-acid-conjugated iridoid glycoside (harpagoside; IC_{50} = 88.2 μM), 7-*O*-methylmorroniside, and morroniside itself. As a result, 7-*O*-cinnamoylmorroniside was observed to be a potent inhibitor of TNF-α-induced E-selectin expression.

Keywords

Morroniside;
7-*O*-Cinnamoylmorroniside;
Anti-inflammatory activity