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山楂叶悬钩子根抗氧化活性成分研究

投稿时间: 2012-10-21 责任编辑: [点击下载全文](#)

引用本文: 魏忠宝,孙佳明,李朋飞,王帅,张辉,林喆.山楂叶悬钩子根抗氧化活性成分研究[J].中国中药杂志,2012,37(23):3591.

DOI: 10.4268/cjmm.20122318

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基金项目: 吉林省中医药管理局中医药科技项目(08gz-03)

中文摘要:目的: 研究山楂叶悬钩子根抗氧化活性成分。方法: 综合利用硅胶减压柱色谱、凝胶柱色谱分离方法分离纯化山楂叶悬钩子根中化学成分, 运用多种波谱技术(UV, ¹H-NMR, ¹³C-NMR, MS)鉴定化合物结构, 进一步通过DPPH法评价各化合物的抗氧化活性。结果: 从山楂叶悬钩子根中分离得到9个化合物, 分别为蔷薇酸(1)、山奈酚-3-O-β-D-吡喃半乳糖苷(2)、咖啡酸(3)、2α, 19α, 24-三羟基马苏-12-烯-3-氧-28-酸(4)、2α-羟基齐墩果酸(5)、乌苏酸(6)、胡萝卜苷(7)、β-谷甾醇(8)、白藜芦醇苷(9)。抗氧化实验结果表明化合物2和9在50 mg · L⁻¹时对DPPH自由基清除能力分别为95.60%, 75.23%。结论: 化合物1~8为首次从该植物中分离得到, 化合物2和9具有明显的抗氧化活性。

中文关键词: [悬钩子属](#) [山楂叶悬钩子](#) [化学成分](#) [抗氧化活性](#)

Antioxidant activity constituents from root of *Rubus crataegifolius*

Abstract: Objective: To study the antioxidant constituents from the root of *Rubus crataegifolius*. **Method:** The constituents isolation and purification from the root of *R. crataegifolius* was carried by reported column chromatography including silica gel, toyopearl, and their structures were elucidated on the basis of spectral compounds. DPPH method was used to evaluate the free radical scavenging activity of the isolated compounds. **Result:** Nine compounds were isolated from the root of *R. crataegifolius*, and their structures were identified as follow: euscaphic acid (1), kaempferol-3-O-β-D-galactopyranoside(2), tormentic acid (3), 2α, 19α, 24-trihydroxyurs-12-ene-3-oxo-28-acid (4), 2α-hydroxy-oleanic acid (5), ursolic acid (6), daucosterol (7), β-sitosterol (8) and polydatin (9). By experiment of antioxidant activity, the result showed compounds 2 and 9 revealed DPPH free radical scavenging rates were 95.60% and 75.23% at the concentration of 50 mg · L⁻¹. **Conclusion:** Compounds 1-8 were isolated from this plant for the first time, and compounds 2 and 9 showed the significant antioxidant activity.

keywords: [Rubus](#) [Rubus crataegifolius](#) [constituents](#) [antioxidant](#)

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