

论文

东北刺人参叶中四种新三萜皂苷的分离与结构鉴定

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摘要:

目的研究东北刺人参的三萜皂苷化学成分。方法采用大孔树脂、硅胶、ODS柱色谱分离纯化, 经理化常数、光谱学方法鉴定结构。结果分离得到了4个新三萜皂苷, 其结构分别鉴定为3-O-β-D-吡喃葡萄糖基3β, 23-二羟基羽扇豆-20(29)-烯-28-酸-28-O-α-L-吡喃鼠李糖基(1→4)-β-D-吡喃葡萄糖基(1→6)-β-D-吡喃葡萄糖苷(1); 3-O-β-D-吡喃葡萄糖基常春藤皂苷元-28-O-α-L-吡喃鼠李糖基(1→4)-β-D-吡喃葡萄糖基(1→6)-β-D-吡喃葡萄糖苷(2); 3-O-β-D-吡喃葡萄糖基3β-羟基齐墩果-9(11), 12-二烯-28-酸-28-O-α-L-吡喃鼠李糖基(1→4)-β-D-吡喃葡萄糖基(1→6)-β-D-吡喃葡萄糖苷(3); 3α-羟基齐墩果-12-烯-23, 28-二酸-28-O-α-L-吡喃鼠李糖基(1→4)-β-D-吡喃葡萄糖基(1→6)-β-D-吡喃葡萄糖苷(4)。结论化合物1~4均为新三萜皂苷, 首次从东北刺人参叶中分得。

关键词: 刺人参 三萜皂苷 刺人参苷S 刺人参苷T 刺人参苷U 刺人参苷V

Structures of four new triterpenoid saponins from the leaves of *Oplopanax elatus* Nakai

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Abstract:

Aims Isolation and structural elucidation of the triterpenoid saponins of *Oplopanax elatus* Nakai. Methods Solvent extraction and column chromatography were used to isolate the triterpenoid saponins, physico-chemical constants and spectroscopic analysis were employed for structural elucidation. Results Four new triterpenoid saponins named cirenshenoside S (1), cirenshenoside T (2), cirenshenoside U (3) and cirenshenoside V (4) were isolated, and their structures were elucidated to be 3-O-β-D-glucopyranosyl 3β,23-dihydroxylup-20(29)-en-28-oic acid 28-O-α-L-rhamnopyranosyl(1→4)-β-D-glucopyranosyl(1→6)-β-D-glucopyranoside (1), 3-O-β-D-glucopyranosyl hederagenin 28-O-α-L-rhamnopyranosyl(1→4)-β-D-glucopyranosyl(1→6)-β-D-glucopyranoside (2), 3-O-β-D-glucopyranosyl 3β-hydroxyolean-9(11),12-dien-28-oic acid 28-O-α-L-rhamnopyranosyl(1→4)-β-D-glucopyranosyl(1→6)-β-D-glucopyranoside (3) and 3α-hydroxyolean-12-dien-23,28-dioic acid 28-O-α-L-rhamnopyranosyl(1→4)-β-D-glucopyranosyl(1→6)-β-D-glucopyranoside (4), respectively. Conclusion Compounds 1-4 are new triterpenoid saponins and isolated from the leaves of *Oplopanax elatus* Nakai for the first time.

Keywords: triterpenoid saponins cirenshenoside S cirenshenoside T cirenshenoside U cirenshenoside V *Oplopanax elatus* Nakai.

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