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元胡多糖YhPS-1的理化性质、结构分析及抗肿瘤活性研究

陶移文,田庚元*

(中国科学院上海有机化学研究所生命有机化学国家重点实验室上海200032)

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摘要 从中药元胡 (*Cordalis yanhusuo* W. T. Wang) 根茎中分离提取, 经凝胶渗透柱层析和离子交换色谱纯化得到元胡多糖YhPS-1, 进而测定它的单糖组成、糖含量、分子量和元素组成等理化性质, 通过化学方法结合一维、二维NMR图谱分析其结构。结果表明, 元胡多糖YhPS-1由末端 α -吡喃葡萄糖残基、1,6连接的 α -吡喃葡萄糖残基、1,4连接的 α -吡喃葡萄糖残基以及1,4,6连接的 α -吡喃葡萄糖残基构成。生物活性实验表明元胡多糖YhPS-1能抑制小鼠体内路易斯肺癌和S180细胞瘤的生长。

关键词 [元胡,理化性质,结构,抗肿瘤活性,多糖](#)

分类号

Studies on the Physicochemical Properties, Structure and Antitumor Activity of Polysaccharide YhPS-1 from the Root of *Cordalis yanhusuo* Wang

TAO Yi-Wen, TIAN Geng-Yuan*

State Key Laboratory of Bio-organic and Natural Products Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai 200032, China

Abstract A polysaccharide named YhPS-1 was isolated from the root of *Cordalis yanhusuo* Wang and purified by means of gel-permeation chromatography and ionexchange chromatography. Its physicochemical properties, including monosaccharide composition, carbohydrate content, molecular weight and elemental composition, were determined. The structure of YhPS-1 was elucidated by chemical methods along with ^1H and ^{13}C NMR spectroscopy ways, such as including two-dimensional HMQC and HMBC experiments. These results show that YhPS-1 possesses a backbone consisting of terminal α -GlcP-(1 \rightarrow), α -GlcP-(1 \rightarrow 6), α -GlcP-(1 \rightarrow 4) and α -GlcP-(1 \rightarrow 4,6). The bioactive assay showed that it could inhibit the growth of Sarcoma 180 and Lewis pulmonary carcinoma implanted in mice.

Key words [Cordalis yanhusuo Wang](#) [physicochemical property](#) [structure](#) [antitumor activity](#) [polysaccharide](#)

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通讯作者 田庚元 tiangy@mail.sioc.ac.cn

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