Accepted Manuscript

Title: Structural characterization and antitumor activity of a polysaccharide from ramulus mori

Authors: Yajie Chen, Xue Jiang, Hongqing Xie, Xiaotong Li,

Liangen Shi

PII: S0144-8617(18)30184-X

DOI: https://doi.org/10.1016/j.carbpol.2018.02.036

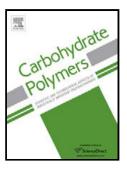
Reference: CARP 13298

To appear in:

Received date: 1-1-2018 Revised date: 8-2-2018 Accepted date: 11-2-2018

Please cite this article as: Chen, Yajie., Jiang, Xue., Xie, Hongqing., Li, Xiaotong., & Shi, Liangen., Structural characterization and antitumor activity of a polysaccharide from ramulus mori. *Carbohydrate Polymers* https://doi.org/10.1016/j.carbpol.2018.02.036

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



ACCEPTED MANUSCRIPT

Structural characterization and antitumor activity of a polysaccharide from ramulus mori

Yajie Chen, Xue Jiang, Hongqing Xie, Xiaotong Li, Liangen Shi*

College of Animal Sciences, Zhejiang University, Hangzhou, Zhejiang, 310058, China

*Corresponding author. Tel. & Fax: +86 571 88982723

E-mail address: slgsilk@zju.edu.cn

Highlights:

- Polysaccharide RMP1 was isolated from ramulus mori.
- Composition and structure of RMP1 was elucidated.
- RMP1 showed antitumor effect in vitro.
- RMP1 could induce cell apoptosis and cell cycle arrest.
- RMP1 has good potential as a novel antitumor agent.

ABSTRACT

This study investigated the chemical characterization and antitumor effects of a polysaccharide from ramulus mori. A water-soluble polysaccharide, RMP1 with the estimated molecular weight of 137 kDa, was isolated and purified from ramulus mori through gel permeation chromatography. RMP1 is mainly composed of arabinose, xylose, glucose, galactose and rhamnose in a ratio of 0.56:0.37:0.17:1.00:0.08. Methylation and NMR analysis revealed that RMP1 had a backbone composed of $1,6-\beta$ -D-Galp, $1,3,6-\beta$ -D-Galp and $1,3-\beta$ -D-Galp residues, two main branches of $1,2-\alpha$ -L-Araf, $1,3,6-\beta$ -D-Galp and $1,4-\beta$ -D-Xylp; it also had α -L-Araf and β -D-Glcp as terminals. In the MTT assay, RMP1 showed significant anticancer effects against the SGC-7901 and HeLa

Download English Version:

https://daneshyari.com/en/article/7782981

Download Persian Version:

https://daneshyari.com/article/7782981

<u>Daneshyari.com</u>