中国中药杂志
China Journal of Chinese Materia Medica

山菠菜三萜组分在体外及体内对Ⅱ相解毒酶的调控作用机制

投稿时间： 2012-05-04 责任编辑： 点此下载全文

引用本文：金苹,谭晓斌,刘文博,贾晓斌.山菠菜三萜组分在体外及体内对Ⅱ相解毒酶的调控作用机制[J].中国中药杂志,2012,37(23):3637.

DOI：10.4268/cjcmm20122327

作者中文名	作者英文名	单位中文名	单位英文名	E-Mail
金苹	JIN Ping	江苏省中医药研究院 国家中医药管理局中药释药系统重点研究室, 江苏 南京 210028 江苏大学 药学院, 江苏 镇江 212003	Key Laboratory of New Drug Delivery System of Chinese Materia Medica, Jiangsu Provincial Academy of Traditional Chinese Medicine, Nanjing 210028, China Department of Pharmaceutics, Jiangsu University, Zhenjiang 212003, China	
谭晓斌	TAN Xiao-bin	江苏省中医药研究院 国家中医药管理局中药释药系统重点研究室, 江苏 南京 210028	Key Laboratory of New Drug Delivery System of Chinese Materia Medica, Jiangsu Provincial Academy of Traditional Chinese Medicine, Nanjing 210028, China	
刘文博	LIU Wen-bo	江苏省中医药研究院 国家中医药管理局中药释药系统重点研究室, 江苏 南京 210028	Key Laboratory of New Drug Delivery System of Chinese Materia Medica, Jiangsu Provincial Academy of Traditional Chinese Medicine, Nanjing 210028, China	
贾晓斌	JIA Xiao-bin	江苏省中医药研究院 国家中医药管理局中药释药系统重点研究室, 江苏 南京 210028 江苏大学 药学院, 江苏 镇江 212003	Key Laboratory of New Drug Delivery System of Chinese Materia Medica, Jiangsu Provincial Academy of Traditional Chinese Medicine, Nanjing 210028, China Department of Pharmaceutics, Jiangsu University, Zhenjiang 212003, China	xiaobinjia_nj@126.com

基金项目:江苏省中医药科技专项(LZ11062);江苏省"六大人才高峰"项目(HZ09032)

中文摘要:目的:研究山菠菜三萜组分体外及体内对Ⅱ相酶的活力及其蛋白表达的影响。方法:体外采用正常人支气管上皮(NHBE)细胞模型,体内采用昆明(KM)小鼠模型,以1-氯-2,4-二硝基苯(CDNB)比色法检测GST活力,NADPH与2,6-二氯靛酚钠(DCIP)测试NQO1活力,5,5-二硫二硝基苯甲酸(DTNB)比色法测定GSH含量,Western blot测定NQO1蛋白的表达。结果:山菠菜三萜组分能增加NHBE细胞和KM小鼠肺脏内GST和NQO1的酶活力并增加GSH的含量,在体外增加NQO1和Nrf2的蛋白表达。结论:山菠菜三萜组分可以通过调节体内外Ⅱ相解毒酶的酶活力及蛋白表达来实现癌化学预防。

中文关键词:山菠菜 三萜组分 GSH GST NQO1

Regulation mechanism of triterpenoid components from *Prunella asiatica* on phase Ⅱ detoxifying enzymes *in vitro* and *in vivo*

Abstract: To study the effects of triterpenoid components from *Prunella asiatica* on phase Ⅱ detoxifying enzymes and protein expression *in vitro* and *in vivo*. Normal human bronchial epithelial (NHBE) cell model was used *in vitro*, and the mouse model of Kunming (KM) mice was used *in vivo*. CDNB assay was used to measure the activity of GST. NADPH and DCIP was used to detect the activity of NQO1. DTNB colorimetric assay was used to detect GSH. Western blot was use to detect the protein expression of NQO1. We found that triterpenoid components from *P. asiatica* could increase the activity of GST, NQO1 and GSH in NHBE cells and KM mice. NQO1 protein expression can also be increased *in vitro*. The study suggests that triterpenoid components from *P. asiatica* can prevent the lung cancer by regulating the body phase Ⅱ detoxification enzyme activity and protein expression.

keywords:*Prunella asiatica* triterpenoid components GSH GST NQO1

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