

论文

反式白藜芦醇葡萄糖苷在大鼠组织中的体外代谢研究

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摘要:

采用体外孵化方法考察反式白藜芦醇葡萄糖苷(TRG)在大鼠胃、十二指肠、空肠、回肠和肝脏组织提取物中代谢情况, 研究TRG的脱糖代谢机制。结果表明, 优化的孵化时间为90 min, 蛋白质量浓度为3.2 mg·mL<sup>-1</sup>, 底物浓度为50 μmol·L<sup>-1</sup>。TRG与大鼠各组织37 °C孵化90 min后, 其代谢物反式白藜芦醇在大鼠胃、十二指肠、空肠、回肠和肝脏提取物中的产率分别为(3.50±0.24)%, (65.7±5.94)%, (83.5±6.43)%, (77.6±6.26)%和(9.62±1.21)%, 小肠组织对TRG的水解能力明显大于肝脏, 提示大鼠肠黏膜在TRG脱糖代谢中起着非常重要的作用, 该代谢途径可能由β-葡萄糖苷酶催化。

关键词: 反式白藜芦醇葡萄糖苷 孵化 代谢

Metabolism of *trans*-resveratrol-3-*O*-glucoside *in vitro* in rat tissues

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Abstract:

To study the metabolism of *trans*-resveratrol-3-*O*-glucoside (TRG) *in vitro* in rat tissues, the incubation with cell-free extracts from rat stomach, duodenum, jejunum, ileum and liver was performed, separately. After TRG was incubated with the tissue extracts at 37 °C for up to 90 min, the deglycosylation of TRG was (3.50±0.24)% for stomach, (65.7±5.94)% for duodenum, (83.5±6.43)% for jejunum, (77.6±6.26)% for ileum and (9.62±1.21)% for liver, separately. It was observed that the small intestine extracts were more active in deglycosylation of TRG than the liver extract, which suggested that the small intestine mucosa played an important role in deglycosylation of TRG. It was assumed that the deglycosylation of TRG was catalyzed by β-glucosidase in small intestine mucosa.

Keywords: incubation metabolism *trans*-resveratrol-3-*O*-glucoside

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