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[1]吴登艳,宋娇,董海良,等.mTOR信号通路介导黄芩苷抑制人结肠癌细胞的增殖[J].第三军医大学学报,2012,34(23):2399-2402.

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## mTOR信号通路介导黄芩苷抑制人结肠癌细胞的增

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Title: mTOR signaling pathway mediates baicalin-inhibited proliferation in

human colon cancer cell line HCT116

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关键词: 黄芩苷; 人结直肠癌HCT116细胞; 增殖; mTOR信号通路

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摘要: 目的 探讨黄芩苷抑制人结肠癌细胞(HCT116)增殖的分子机制。 方法 采

用MTT比色法检测不同浓度的黄芩苷( $0.01\sim100~\mu g/ml$ )对体外培养的HCT116细胞增殖的抑制作用,采用Western blot分析检测被黄芩苷干预的HCT 116细胞的增殖相关蛋白的表达。 结果 与对照组比较 浓度为 $1\sim100~\mu g/ml$ 的黄芩苷处理组明显抑制HCT 116细胞的增殖(P<0.05)。用 $100~\mu g/ml$ 黄芩苷处理后,增殖相关的蛋白mTOR、

p70S6K、S6、elF4E表达明显下调(*P*<0.05),4E-BP1表达明显上调。p-mTOR(Ser2448)、p-S6(Ser235/236)、p-4E-BP1(Thr37/46)的磷酸化水平下降(*P*<0.05)。

结论 黄芩苷能通过抑制<sup>mTOR</sup>信号通路来抑制人结直肠癌<sup>HCT116</sup>细胞的增殖。

Abstract: Objective To determine the inhibitory effect of baicalin on the proliferation

of human colon cancer cell line HCT116 and its underlying mechanism.

Methods Human colon cancer cell line HCT116 were primarily cultured in vitro and treated with baicalin at different concentrations of 0.01 to 100  $\mu$ g/ml. MTT assay was performed to assess the cell proliferation. Western blotting was used to analyze the expression of cell proliferation related proteins in HCT116 cells after baicalin treatment. Results Baicalin from 1 to 100  $\mu$ g/ml

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resulted in significantly inhibitory effect on HCT116 cells proliferation compared with the control group (P<0.05). The protein expression of mTOR, p70S6K,S6 and elF4E were significantly down-regulated by baicalin (100  $\mu$ g/ml) (P<0.05), as well as the expression of 4E-BP1 was significantly up-regulated. The phosphorylation of mTOR, S6 and 4E-BP1 were suppressed by baicalin (100  $\mu$ g/ml) in HCT116 cells (P<0.05). Conclusion Baicalin inhibited the proliferation in HCT116 cells through mTOR signaling pathway.

## 参考文献/REFERENCES

吴登艳, 宋娇, 董海良, 等. mTOR信号通路介导黄芩苷抑制人结肠癌细胞的增殖[J]. 第三军医大学学报,2012,34(23):2399-2402.

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