

论著

# NS-398调节HepG2细胞P53和组蛋白H3乙酰化抑制细胞增殖的研究

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**摘要** 背景与目的: 研究NS-398对HepG2细胞组蛋白H3和非组蛋白P53的乙酰化和细胞增殖的作用, 并探讨NS-398的抗肿瘤机制。材料与方法: 应用不同浓度(0,100,200,300,400 μmol/L)的NS-398作用HepG2细胞不同时间(0,12,24,36,48 h)后,采用MTT法测定NS-398对HepG2细胞增殖的影响,用Western blot法检测乙酰化组蛋白H3和乙酰化P53的水平。结果: NS-398可抑制HepG2细胞的增殖,且呈时间和剂量依赖性,在24 h、36 h和48 h的IC50值分别为300 μmol/L、200 μmol/L和150 μmol/L; NS-398能明显上调组蛋白H3的乙酰化水平,促进P53的表达和P53的乙酰化。结论: NS-398具有去乙酰化酶抑制剂作用,能上调组蛋白H3乙酰化水平,促进肿瘤抑制因子P53表达和活化,抑制肿瘤细胞增殖。

**关键词** [NS-398](#) [组蛋白H3](#) [P53基因](#) [HepG2细胞](#)

## Effects of NS-398 on the Acetylation of Histone H3 and P53 and the Proliferation of HepG2 Cells

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**Abstract** **BACKGROUND & AIM:** To investigate the effects of NS-398 on the acetylation of histone H3 and P53 and the proliferation of HepG2 cells. **MATERIALS AND METHODS:** The total protein was extracted from HepG2 cells treated with or without different concentrations of NS-398(0,100, 200, 300, 400 μmol/L)for different times(0,12,24,36, 48 h).Western blot analysis was performed to determine the levels of acetylated histone H3 and acetylated P53.MTT assay was performed to examine the growth inhibition effect of NS-398 on HepG2 cells. **RESULTS:** NS-398 could inhibit the proliferation of HepG2 cells in a time and dose-dependent manner, with the IC50 at 24 h, 36 h and 48 h of 300 μmol/L,200 μmol/L and 150 μmol/L,respectively.The levels of histone H3 acetylation,P53 expression and P53 acetylation were significantly increased. **CONCLUSION:** NS-398 functioned as an acetylase inhibitor,which could increase the level of acetylated Histone H3, enhance the expression and activity of tumor suppressor P53, and inhibit the proliferation of HepG2 cells

**Keywords** [NS-398](#) [Histone H3](#) [P53](#) [HepG2 cell](#)

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