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乙酰肝素酶反义寡核苷酸对肺癌A549细胞黏附、侵袭和凋亡的影响 [点此下载全文](#)

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摘要:

目的: 探讨乙酰肝素酶 (heparanase, HPSE) 反义寡核苷酸 (antisense oligodeoxynucleotide, ASODN) 对肺癌A549细胞黏附、侵袭和凋亡的影响。**方法:** 设计并合成HPSE特异性ASODN (HPSE-ASODN), 脂质体介导转染A549细胞。Western blotting检测A549细胞中HPSE蛋白的表达。黏附实验和侵袭实验检测HPSE-ASODN对A549细胞黏附和侵袭的影响, Hoechst 3222染色法检测HPSE-ASODN对A549细胞凋亡的影响。**结果:** 与对照组和脂质体组相比, HPSE-ASODN转染下调A549细胞中HPSE蛋白的表达, 且显著抑制A549细胞的黏附和侵袭 ($P < 0.01$); HPSE-ASODN转染可诱导A549细胞凋亡, 凋亡率明显高于未转染组和脂质体组 [(44.7±18.9)% vs (1.2±3.3)%, (5.8±20.1)%, $P < 0.01$]。**结论:** HPSE-ASODN能下调肺癌A549细胞中HPSE蛋白的表达, 抑制A549细胞的黏附和侵袭, 诱导其凋亡。

关键词: [肺肿瘤](#) [乙酰肝素酶](#) [反义寡核苷酸](#) [黏附](#) [侵袭](#) [凋亡](#) [基因治疗](#)

Effect of heparanase antisense oligodeoxynucleotide on adhesion, invasion and apoptosis of lung cancer A549 cells [Download Fulltext](#)

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Abstract:

Objective : To study the effects of heparanase antisense oligodeoxynucleotide (HPSE-ASODN) on adhesion, invasion and apoptosis of human lung cancer A549 cells. **Methods:** HPSE specific ASODN was designed, synthesized, and transfected into A549 cells by lipofectin assay. HPSE protein expression was detected by Western blotting analysis in A549 cells, and the effects of HPSE-ASODN on adhesion and invasion of A549 cells were measured by adhesion and invasion assays, respectively. Hoechst 3222 staining was used to detect the effect of HPSE-ASODN on apoptosis of A549 cells. **Results:** Compared with control and lipofectin, HPSE-ASODN transfection inhibited HPSE protein expression, adhesion and invasion of A549 cells ($P < 0.01$). HPSE-ASODN transfection induced apoptosis of A549 cells, with the apoptotic rate being significantly higher than those in the control and lipofectin groups [(44.7±18.9)% vs (1.2±3.3)%, (5.8±20.1)%, $P < 0.01$]. **Conclusion:** HPSE-ASODN can inhibit HPSE protein expression, adhesion and invasion in lung cancer A549 cells; it can also induce the apoptosis of lung cancer A549 cells.

Keywords: [lung neoplasms](#) [heparanase](#) [antisense oligodeoxynucleotide](#) [adhesion](#) [invasion](#) [apoptosis](#) [gene therapy](#)

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