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人脑胶质瘤高表达Snail促进肿瘤细胞的侵袭 [点此下载全文](#)

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摘要:

目的: 观察Snail蛋白在人脑胶质瘤组织中的表达情况, 探讨Snail表达对人脑胶质瘤U251细胞侵袭的影响。方法: 收集首都医科大学附属北京天坛医院及北京安贞医院神经外科手术切除的脑胶质瘤组织65例, 应用免疫组织化学S-P法检测人脑胶质瘤组织中Snail的表达。体外化学合成 Snail 序列特异性小干扰RNA (Snail-siRNA), 应用脂质体介导转染U251细胞; RT-PCR、Western blotting检测转染后U251细胞中 Snail mRNA和蛋白、E-cadherin蛋白表达水平变化, 并采用 Transwell 小室检测转染后U251细胞侵袭能力的变化。结果: 与正常脑组织相比, 人脑胶质瘤组织中Snail蛋白阳性表达率明显增强 (66.2% vs 0, P < 0.01), 并且 I ~ II 级的胶质瘤组织阳性Snail阳性率明显低于III~IV级 (44.8% vs 83.3%, P < 0.01)。Snail-siRNA转染抑制U251细胞中 Snail mRNA和蛋白的表达。Snail-siRNA转染组U251细胞中E-cadherin蛋白的表达明显高于Ctrl-siRNA组与未转染组 (0.64±0.21 vs 0.15±0.16, 0.21±0.19, P < 0.01)。Snail-siRNA转染显著抑制U251细胞的侵袭 (87.0±2.4 vs 140.0±4.9, 136.0±5.3; P < 0.05)。结论: 人脑胶质瘤组织高表达Snail蛋白, siRNA干扰Snail蛋白的表达可抑制胶质瘤U251细胞的侵袭。

关键词: [胶质瘤](#) [Snail](#) [RNA干扰](#) [侵袭](#)

Human glioma expresses high level of Snail and promotes tumor cell invasiveness [Download Fulltext](#)

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Abstract:

Objective: To investigate the expression of Snail protein in human glioma tissues and study the effect of Snail on human glioma U251 cells. Methods: Sixty-five specimens from glioma patients, who were diagnosed in Beijing Anzhen Hospital and Beijing Tiantan Hospital, were included in this study. Immunohistochemistry S-P was used to detect Snail protein expression in human glioma tissues. Snail specific small interference RNA (Snail-siRNA) was constructed and transfected into U251 cells by lipofectamine. The expressions of Snail mRNA and protein and E-cadherin protein in transfected-U251 cells were investigated by RT-PCR and Western blotting analysis, respectively; and the invasion ability of transfected-U251 cells was investigated by Transwell chamber assay. Results: The positive rate of Snail was 66.2% in human glioma, which was significantly higher than that in the normal brain tissues (0%, P < 0.01), and Snail positive rate in I - II stage glioma was significantly lower than that in III-IV stage glioma (44.8% vs 83.3%, P < 0.01). Snail-siRNA transfection inhibited the expressions of Snail mRNA and protein. The expression of E-cadherin protein in Snail-siRNA transfected-U251 cells was significantly increased compared with those in Ctrl-siRNA and untransfected groups (0.64±0.21 vs 0.15±0.16, 0.21±0.19, P < 0.01). Snail-siRNA transfection inhibited the invasion of U251 cells (87.0±2.4 vs 140.0±4.9, 136.0±5.3; P < 0.05). Conclusion: Snail protein is highly expressed in human glioma tissues, and siRNA interfering the expression of Snail protein can inhibit invasion of glioma U251 cells.

Keywords: [glioma](#) [Snail](#) [RNA interference](#) [invasion](#)

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