



42-45. TAT-ASPP2融合蛋白的制备及其对胶质瘤细胞增殖的抑制作用[J]. 何火聪, 苏颖, 潘剑茹, 黄争荣. 中国肿瘤生物治疗杂志, 2011, 18(1)

TAT-ASPP2融合蛋白的制备及其对胶质瘤细胞增殖的抑制作用 [点此下载全文](#)

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基金项目: 国家自然科学基金资助项目 (No. 30800285); 福建省卫生厅青年科研课题 (No. 2007-1-20)

DOI:

摘要:

目的: 制备TAT-ASPP2融合蛋白, 探讨其对U-87MG和U251细胞增殖的抑制作用。方法: 设计TAT-ASPP2引物, 应用IN-Fusion技术构建原核表达质粒pET-TAT-ASPP2, 双酶切、DNA测序鉴定后转化大肠杆菌 E.coli BL21, IPTG诱导TAT-ASPP2融合蛋白的表达, SDS-PAGE和Western blotting鉴定TAT-ASPP2融合蛋白。MTT法检测TAT-ASPP2融合蛋白对U-87MG和U251细胞增殖的作用。结果: 成功构建了原核表达质粒pET-TAT-ASPP2, 转化 E.coli BL21后成功表达TAT-ASPP2融合蛋白, 其相对分子质量约为128 000, 并可被ASPP2特异性抗体所识别。TAT-ASPP2融合蛋白对 U-87MG 和U251细胞增殖的抑制率分别为(65.0±3.0)%和(64.7±2.5)%, 而ASPP2蛋白则不能抑制U-87MG和U251细胞的增殖。结论: 成功地克隆、表达及纯化TAT-ASPP2融合蛋白, 该融合蛋白可抑制胶质瘤细胞的增殖。

关键词: [胶质瘤](#) [TAT-ASPP2](#) [融合蛋白](#) [增殖](#)

Preparation of TAT-ASPP2 fusion protein and its inhibitory effect against proliferation of glioma cells [Download Fulltext](#)

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Fund Project: Project supported by the National Natural Science Foundation of China (No. 30800285), and the Young Scientist Foundation from Health Bureau of Fujian Province (No. 2007-1-20)

Abstract:

Objective: To prepare the TAT-ASPP2 fusion protein and investigate its inhibitory effect against the proliferation of glioma U-87MG and U251 cells. Methods: TAT-ASPP2 specific primer was designed and recombinant prokaryotic expression vector pET-TAT-ASPP2 was constructed using the In-Fusion cloning technique. After identified by double endonuclease digestion and DNA sequencing, pET-TAT-ASPP2 vector was transformed into E. coli BL21 and TAT-ASPP2 fusion protein was induced by IPTG. TAT-ASPP2 fusion protein was further identified by SDS-PAGE and Western blotting analysis. The effects of TAT-ASPP2 fusion protein on proliferation of U-87MG and U251 cells were detected by MTT assay. Results: The prokaryotic expression plasmid pET-TAT-ASPP2 was successfully constructed, and TAT-ASPP2 fusion protein was induced by IPTG in transformed E. coli BL21; the molecular weight of the fusion protein was about 128 000 and it could be specifically recognized by ASPP2 antibody. TAT-ASPP2 fusion protein significantly inhibited the proliferation of U-87MG and U-251 cells, with the inhibitory rates being about (65.0±3.0)% and (64.7±2.5)%, respectively; while ASPP2 protein did not inhibit the proliferation of U-87MG and U-251 cells. Conclusion: TAT-ASPP2 fusion protein has been successfully expressed and purified, and the fusion protein can significantly inhibit the proliferation of glioma cells.

Keywords: [glioma](#) [TAT-ASPP2](#) [fusion protein](#) [proliferation](#)

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