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IL-21在肝癌细胞株H22细胞中的表达及其活性 [点此下载全文](#)

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摘要:

**摘要** 目的: 构建小鼠IL-21 (mIL-21) 真核表达载体mIL-21-pcDNA3.1, 转染肝癌H22细胞, 探讨其生物学活性。mIL-21真核表达载体mIL-21-pcDNA3.1, 并经DNA测序证实。脂质体法介导mIL-21-pcDNA3.1转染H22细胞, RT-PCR检测mIL-21-pcDNA3.1对T细胞增殖和NK细胞杀伤活性的影响。结果: DNA序列分析证实构建的mIL-21-pcDNA3.1正确转染的H22细胞中有mIL-21的表达。MTT法显示, 转染mIL-21的H22细胞培养上清刺激T细胞增殖的刺激指数 (stimulation index, SI) 为 $4.673 \pm 0.450$ , 均显著高于转染空质粒组的 $1.465 \pm 0.103$ 和未转染组的 $1.447 \pm 0.245$  ( $P < 0.01$ )。杀伤率为 $(81.66 \pm 4.26)\%$ , 显著高于转染空质粒组的 $(34.74 \pm 5.52)\%$ 和未转染对照组的 $(33.61 \pm 1.42)\%$ 。结论: mIL-21可显著增强T细胞增殖及NK细胞的杀伤功能, 为其在抗肝癌治疗中的应用奠定了基础。

关键词: [肝肿瘤](#) [mIL-21基因](#) [H22细胞株](#) [真核表达](#)

IL-21 expression in hepatoma cell line H22 and its biological activity [Download Fulltext](#)

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Abstract:

**Abstract** Objective: To construct a recombinant eukaryotic expression vector mIL-21-pcDNA3.1 and transfect it into H22 cells, so as to assess the biological activity of mIL-21. Methods: The gene fragment encoding mouse IL-21 was then cloned into eukaryotic expression plasmid pcDNA3.1 to form recombinant plasmid mIL-21-pcDNA3.1, which was verified by DNA sequencing. mIL-21-pcDNA3.1 was transfected into H22 cells with lipofect reagent, and its biological activity was detected by RT-PCR and Western blotting analysis. The effects of mIL-21-pcDNA3.1 on proliferation of T cells and cytotoxicity of NK cells were investigated. Results: The recombinant plasmid mIL-21-pcDNA3.1 was confirmed by DNA sequencing. The expression of mIL-21 was detected by RT-PCR and Western blotting analysis. MTT results showed that stimulation index (SI) of T cells stimulated by supernatant was  $3.412 \pm 0.312$ , and the SI of ConA combination stimulating group was  $4.673 \pm 0.450$ ; but those in the mock vector transfected ( $1.465 \pm 0.103$ ) and untransfected groups ( $1.447 \pm 0.245$ ,  $P < 0.01$ ). The cytotoxicity of NK cells in the mIL-21-H22 cell supernatant group was  $(81.66 \pm 4.26)\%$ , significantly higher than those in the mock vector transfected and untransfected groups ( $[33.61 \pm 1.42]\%$ ). Conclusion: The expression of mIL-21-pcDNA3.1 plasmid in H22 cells and the cytotoxicity of NK cells, which lays a foundation for its role in the research of anti-hepatoma.

Keywords: [live neoplasms](#) [mIL-21](#) [H22 cell line](#) [eukaryotic expression](#)

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