

عنوان مقاله:

Designing and Cloning of cytolethal distending toxin B as Biological Tool against cancer

محل انتشار:

دهمین کنگره بین المللی سرطان پستان (سال: 1393)

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خلاصه مقاله:

Cancer is the most common cause of death. Resistance to conventional anticancer therapies in patients with advanced solid tumors has prompted the need of alternative cancer therapies. The cytolethal distending toxins (CDTs) were produced by a variety of Gram-negative pathogenic bacteria. The mechanism of cytotoxicity of toxin is unique in breaks double-stranded DNA. CDT is the product of a three-gene operon (cdtA, cdtB and cdtC). CdtB-associated deoxyribonuclease (DNase) activity is responsible for Cdt-induced cell cycle arrest, suggesting that DNase activity is essential for the CDT toxicity. Material and methods: DNA encoding the CdtB was amplified by PCR using specific primers with appropriate restriction enzyme sites in their ends. The gene was cloned in the pcDNA 3.1(+) vector. Results: The construct was confirmed by colony PCR, restriction analysis and sequencing. Conclusion: The gene was cloned in the pcDNA 3.1(+) vector. CDTs as Biological Tool—Because CDTs interfere with the cell cycle control machinery. It is noteworthy that the use of cytotoxic prodrugs has been considered in the field of cancer gene therapy therefore the construct include CdtB as a biological tool can use against variety of cancers

کلمات کلیدی:

Cytolethal distending toxin, cytotoxicity, deoxyribonuclease

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