

综述

表遗传修饰对多药耐药基因1调控的研究进展

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摘要

多药耐药基因1(multidrug resistance gene 1, MDR1)的耐药机制与药物的泵出有关。过去的十年里,在有关耐药基因的调控方面已经做了大量的研究。MDR1基因表达受许多因素的影响。最近研究证实,表遗传修饰在调控MDR1基因表达中起重要作用。表遗传通过对DNA的甲基化和组蛋白脱乙酰化的修饰来调节MDR1基因的表达。应用化学物质可以逆转MDR1基因依赖性多药耐药,提高化疗敏感性,这将为癌症治疗提供新策略。

关键词 [表遗传学](#) [DNA甲基化](#) [多药耐药基因1](#) [组蛋白修饰](#)

分类号

Progression about epigenetic regulation of multidrug resistance gene 1

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Abstract

Multidrug resistance genes 1 (MDR1) is involved in drug efflux, and their regulation have been the subject of intense research efforts in the past 10 years. Many factors and cellular signaling pathways play a role in the regulation of MDR1 gene expression. Recent evidence points to an important role for the epigenetic regulation of MDR1 gene expression. Epigenetics can regulate the transcription of MDR1 gene through the DNA methylation and histone modification, which lead to the high expression of P-gp, causing drug resistance. Using chemical factors to intervene in the epigenetic modification can reverse the MDR1 gene dependent multidrug resistance, and improve the sensitivity of chemotherapy. It provides the novel strategy for treatment of malignant tumors.

Key words [epigenetics](#) [DNA methylation](#) [drug resistance genes 1 \(MDR1\)](#) [histone modification](#)

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