# miR-221增强乳腺癌细胞对多西他赛的耐药性

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**Title:** **miR-221 enhances docetaxel resistance of breast cancer cells**

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**摘要:** 目的：探究miR-221在人乳腺癌细胞T47D和MCF-7多西他赛(docetaxel)耐药性中的作用及机制。方法：qPCR检测多西他赛处理乳腺癌细胞T47D和MCF-7不同时间点，细胞中miR-221含量的变化；qPCR和Western blot检测miR-221 mimics的转染效率。用阴性对照（NC）或miR-221 mimics转染细胞，不同浓度的多西他赛刺激细胞72小时后，MTT法检测细胞对多西他赛的耐药性；PI和Annexin V双染法检测miR-221 过表达对T47D和MCF-7细胞凋亡的影响；qPCR和Western blot检测靶蛋白p27的表达。结果:在T47D和MCD-7中多西他赛刺激明显促进miR-221的表达量升高；miR-221在细胞内可以发挥生物学效应，降低靶蛋白p27的表达；且过表达miR-221明显增强T47D和MCF-7对多西他赛的耐药性，降低其凋亡率。结论:miR-221过表达可明显增强T47D和MCF-7细胞对多西他赛的耐药性。

**Abstract:** Objective:To investigate the effects of miR-221 on docetaxel drug resistance of breast cancer cell line T47D and MCF-7.Methods:The relative expressions of miR-221 in T47D and MCF-7 cell lines treated with docetaxel or not were identified by qPCR.qPCR and Western blot were used to test miR-221 mimics transfection efficiency.MTT assay was used to test cell viability of cells treated with docetaxel or not in presence of different concentration of docetaxel.T47D and MCF-7 cells were treated with docetaxel,then flow cytometry was used to detect the effect of miR-221 on cell apoptosis.Results:The relative expression of miR-221 in T47D and MCF-7 cells treated with docetaxel was significantly higher than T47D cells.Compared with control cells,miR-221 mimics can significantly improve the proliferation of T47D cells.miR-221 mimics can also decrease the percentages of T47D cell apoptosis.Conclusion:miR-221 may significantly enhance breast cancer T47D and MCF-7 cells to docetaxel resistance.

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