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阿苯达唑抑制结肠癌SW480细胞的侵袭和迁移能力及其可能的机制 [点此下载全文](#)

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摘要:

目的: 探索阿苯达唑(albendazole)抑制结肠癌SW480细胞侵袭和迁移能力及其可能的机制。方法: 体外培养人结肠癌SW480细胞, 用不同质量浓度(0、1.0和2.0 mg/ml)的albendazole处理人结肠癌SW480细胞, CCK-8法检测 albendazole对结肠癌SW480细胞增殖能力的影响, 采用细胞划痕实验、Transwell小室实验检测细胞的迁移侵袭能力, 免疫细胞化学及Western blotting检测SW480细胞中E-cadherin、MMP-2和MMP-9蛋白的表达水平。结果: 与空白对照组比较, albendazole各质量浓度(1.0和2.0 mg/ml)组细胞的增殖能力明显降低, SW480细胞侵袭细胞数显著下降[(51.33±3.96)、(23.42±4.03) vs (80.76±7.18) 个/视野, F =3.975, P =0.026]; 而且细胞迁移能力显著下降[(9.6±1.13)、(6.4±0.81) vs (19.6±1.41) mm; F =5.012, P =0.023]; E-cadherin蛋白表达水平上调, MMP-2、MMP-9蛋白表达水平明显下调。结论: Albendazole能显著抑制SW480细胞增殖, 并通过上调E-cadherin的表达水平和下调MMP-2和MMP-9的分泌水平抑制细胞的侵袭和迁移能力。

关键词: [阿苯达唑](#) [结肠癌](#) [SW480细胞](#) [侵袭](#) [迁移](#)

Albendazole-mediated inhibition on invasion and migration of colon carcinoma SW480 cells and the underlying mechanisms [Download Fulltext](#)

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Abstract:

Objective : To investigate the inhibitory effect of albendazole on colon carcinoma cell invasion and migration as well as the mechanisms underlying the effect. Methods: Colon carcinoma SW480 cells were treated with albendazole at 0 mg/ml, 1.0 mg/ml and 2.0 mg/ml. Cell proliferation was assessed by a cell proliferation assay using a cell counting Kit-8 (CCK-8), cell migration and invasion by wound-healing assays and transwell chamber assays, respectively, and protein levels of E-cadherin, MMP-2 and MMP-9 by immunocytochemistry and Western blotting. Results: Compared with the control (0 mg/ml), 1.0 mg/ml and 2.0 mg/ml albendazole significantly inhibited SW480 cell proliferation (P <0.05), and significantly decreased the invasion and migration in SW480 cells at both concentrations tested (P <0.05). Albendazole treatments significantly reduced the protein level of MMP-2 and MMP-9 but increased the protein level of E-cadherin. Conclusion: Albendazole can inhibit the invasion and migration of SW480 cells, at least partially through up-regulating the expression of E-cadherin and down-regulating the expression of MMP-2 and MMP-9.

Keywords:[albendazole](#) [SW480 cells](#) [invasion](#) [migration](#)

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