[1]罗爽,王继东,何佳,等.apelin对大鼠卵巢颗粒增殖与凋亡的影响[J].第三军医大学学报,2013,35(16):1713-1716.

Luo Shuang,Wang Jidong,He Jia,et al.Apelin promotes proliferation and suppresses apoptosis in rat ovarian granulosa cells via PI3K/Akt signaling pathway[J].J Third Mil Med Univ,2013,35(16):1713-1716.

apelin对大鼠卵巢颗粒增殖与凋亡的影响(PDF) 分享到

《第三军医大学学报》[ISSN:1000-5404/CN:51-1095/R] 卷: 35 期数: 2013年第16期 页码: 1713-1716 栏目: 论著 出版日期: 2013-08-30

Title: Apelin promotes proliferation and suppresses apoptosis in rat ovarian granulosa cells *via* PI3K/Akt signaling pathway

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关键词: ape1in; APJ; 卵巢颗粒细胞; PI3K/Akt

Keywords: apelin; APJ; granulosa cells; PI3K/Akt

分类号: R341;R394.3;R711.75

文献标志码: A

摘要: 目的 探讨apelin对大鼠卵巢颗粒细胞增殖与凋亡的影响。 方法 用apelin 10^{-8} mol/L培育SD大鼠卵巢原代颗粒细胞，小RNA干扰技术（siRNA）抑制颗粒细胞APJ表达，联合PI3K/Akt信号转导阻断剂LY294002和HIMO干预，MTT法及流式细胞术观察细胞增殖与凋亡情况；Western blot检测细胞凋亡相关信号蛋白表达。 结果 MTT检测APJ-siRNA组、LY294002组、HIMO组细胞增殖率，与对照组比较差异均有统计学意义(P<0.05)；与对照组比较，APJ-siRNA组、LY294002组、HIMO组颗粒细胞Bad、Bax、Foxo3a蛋白表达明显上调(P<0.05)；与对照组比较，APJ-siRNA组、LY294002组、HIMO组Bc1-2蛋白表达明显下调(P<0.05)。 结论 ape1in通过APJ/PI3K/Akt信号通路促颗粒细胞增殖抗其凋亡。

Abstract: Objective To determine the effect of apelin on the proliferation and apoptosis in rat ovarian granulosa cells (GCs) *in vitro*. Methods SD rat ovarian GCs were isolated and primary cultured, and then cultured with apelin at a concentration of 10^{-8}mol/L for 12, 24 and 48 h respectively, and then tested by MTT assay and flow cytometry (Annexin/PI). RNA interference (RNAi) was used to down-regulate the expression of APJ in GCs. PI3K/Akt inhibitor LY294002 and HIMO were used to determine the role of the signaling pathway. Western blotting was employed to determine the expression of cell apoptosis-related proteins. Results Apelin of 10^{-8}mol/L promoted the proliferation and anti-apoptosis in GCs (P<0.05). Apelin activated the phosphorylation of Akt, while APJ-

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siRNA, inhibitor LY294002 and HIMO abolished apelin-induced activation of Akt. Western bloting showed that apelin enhancecd the expression of Bcl-2 but suppressed the expression of Bax, Bad, and Foxo3a (P<0.05). The effects were blocked by APJ-siRNA, inhibitor LY294002 and HIMO (P<0.05). Conclusion Apelin promotes the proliferation and suppresses the apoptosis in GC *via* the PI3K/Akt signaling pathway.

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罗爽，王继东，何佳，等. apelin对大鼠卵巢颗粒增殖与凋亡的影响[J].第三军医大学学报,2013,35(16):1713-1716.

更新日期/Last Update: 2013-08-02