

点击复制链接

导航/NAVIGATE	
本期目录/Table of Contents	
下一篇/Next Article	
上一篇/Previous Article	
工具/TOOLS	
引用本文的文章/References	
下载 PDF/Download PDF(1460KB)	
立即打印本文/Print Now	
推荐给朋友/Recommend	
查看/发表评论/Comments	
统计/STATISTICS	
摘要浏览/Viewed	
全文下载/Downloads	78
评论/Comments	67

RSS XML

转录辅助因子PC4参与大鼠骨髓间充质干细胞体外衰老过程的调控(PDF)

《第三军医大学学报》[ISSN:1000-5404/CN:51-1095/R] 卷: 34 期数: 2012年第07期 页码: 585-588 栏目: 论著 出版日期: 2012-04-15

Title: Transcriptional positive coactivator 4 is involved in senescence of rat bone marrow-derived mesenchymal stem cells

作者: 彭毅; 王涛; 粟永萍; 程天民; 史春梦
第三军医大学预防医学院全军复合伤研究所, 创伤、烧伤与复合伤国家重点实验室, 重庆市纳米医药工程技术研究中心

Author(s): Peng Yi; Wang Tao; Su Yongping; Cheng Tianmin; Shi Chunmeng
State Key Laboratory of Trauma, Burns and Combined Injury, Chongqing Engineering Research Center for Nanomedicine, Institute of Combined Injury, College of Military Preventive Medicine, Third Military Medical University, Chongqing, 400038, China

关键词: 转录辅助因子PC4; 间充质干细胞; 细胞衰老; RNA干扰

Keywords: transcriptional positive coactivator 4; mesenchymal stem cells; cellular senescence; RNA interference

分类号: R329-33; R329.28; R394.2

DOI: -

文献标识码: A

摘要: 目的 研究转录辅助因子PC4 (transcriptional positive coactivator 4) 在骨髓间充质干细胞 (mesenchymal stem cells, MSCs) 体外传代衰老过程中的表达变化特点, 初步探讨其在MSCs增殖和衰老中的可能作用。方法 通过CCK-8法检测并绘制MSCs生长曲线, 流式细胞术检测MSCs免疫表型, 通过RT-PCR和Western blot检测PC4在MSCs长期体外培养中的表达特点, 并检测细胞衰老标志物β-半乳糖苷酶活性的变化, 进一步通过RNA干扰抑制PC4表达, 检测其对MSCs增殖和衰老的影响。结果 本实验分离培养的MSCs早期具有成体干细胞特性, 长期体外连续传代后出现细胞衰老, β-半乳糖苷酶染色呈阳性, PC4在衰老细胞中的表达明显降低, RNA干扰抑制PC4表达后, MSCs增殖受到抑制, β-半乳糖苷酶染色阳性率增加 [转染后48 h阴性对照组 (8.8±2.5)%, 空白对照组 (5.7±1.8)%, siRNA组 (56.3±4.9)%, P<0.05]。结论 转录辅助因子PC4可能参与了体外连续传代培养过程中MSCs增殖活性降低和衰老过程的调控。

Abstract: Objective To investigate the potential role of transcriptional positive coactivator 4 (PC4) in the senescence of rat bone marrow-derived mesenchymal stem cells (MSCs). Methods The expression of PC4 in MSCs was detected by RT-PCR and Western blotting. After the downregulation of PC4 expression by sequence specific siRNA, the proliferation of MSCs was assayed by CCK-8 and the senescence of MSCs was characterized by beta-galactosidase staining. Results After long-term *in vitro* culture, MSCs underwent replicative senescence and the expression of PC4 was significantly decreased. Downregulation of PC4 expression by RNA interference significantly inhibited the proliferation of MSCs and resulted in cellular senescence. Conclusion Transcriptional positive coactivator 4 may play a modulatory role in the proliferation and senescence of rat bone marrow-derived MSCs.

参考文献/REFERENCES

彭毅, 王涛, 粟永萍, 等. 转录辅助因子PC4参与大鼠骨髓间充质干细胞体外衰老过程的调控[J]. 第三军医大学学报, 2012, 34(7): 585-588.

备注/Memo: -

更新日期/Last Update: 2012-03-30