

论著

# 对PTEN缺失小鼠成纤维细胞中DNA氧化损伤的研究

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**摘要** 背景与目的: 研究PTEN缺失细胞中活性氧(ROS)水平、DNA氧化损伤和抗氧化能力的变化。材料与  
方法: 运用化学/荧光发光分析、免疫细胞化学、中性单细胞凝胶电泳技术, 分别比较Pten+/+MEFs与Pten-/-  
-MEFs细胞中ROS、8-羟基脱氧鸟苷(8-OH-dG)水平、DNA双链断裂(DSBs)以及抗氧化能力的差异。结果:  
Pten-/-MEFs细胞中ROS、8-OH-dG水平明显增高, DSBs增加, 抗氧化能力减弱。结论: PTEN可能通过调  
控细胞内ROS水平拮抗DNA氧化损伤。

**关键词** [PTEN](#); [活性氧](#); [DNA氧化损伤](#)

## PTEN Deletion Leads to Increased Oxidative DNA Damage in Mouse Embryonic Fibroblasts

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**Abstract** BACKGROUND AND AIM: To study the variation of the level of reactive oxygen species(ROS), oxidative DNA damage and antioxidative ability between Pten+/+MEFs and Pten-/-MEFs cells. MATERIALS AND METHODS: Fluorescence activated cell sorter (FACS), immunocytochemistry (ICC) and neutral single cell gel electrophoresis(SCGE) were employed to compare the differences of the levels of ROS, 8-hydroxy-2'-deoxyguanosine(8-OH-dG),double-strand breaks(DSBs)and antioxidative ability between Pten+/+MEFs and Pten-/-MEFs cells. RESULTS: In Pten-/-MEFs, the levels of ROS, 8-OH-dG and DSBs were increased. Moreover, its antioxidative ability was decreased. CONCLUSION: PTEN could regulate the level of ROS to affect oxidative DNA damage.

**Keywords** [phosphatase and tensin homolog deleted on chromosome ten](#) [ROS](#) [oxidative DNA damage](#)

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