

论著

## 5-aza-2dC诱导白血病细胞分化及对Annexin A1/A2表达和甲基化状态的影响

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摘要

目的: 观察甲基化转移酶抑制剂5-杂氮-2'-脱氧胞苷(5-aza-2'-deoxycytidine, 5-aza-2dC)对人急性髓系白血病细胞系HL-60细胞分化及对膜联蛋白A1/A2(Annexin A1/A2)表达和甲基化状态的影响。

方法: 瑞氏染色和流式细胞术检测5-aza-2dC对HL-60细胞分化的影响; RT-PCR法检测药物处理HL-60细胞前后Annexin A1和A2基因mRNA的表达水平; 甲基化特异性PCR(methylation-specific PCR, MSP)检测药物处理HL-60细胞前后Annexin A1和A2基因启动子区域CpG岛的甲基化水平。结果: 5-aza-2dC处理后HL-60细胞的髓系分化抗原CD11b的表达增强, 细胞向成熟分化, 且在0.5 μmol/L时其促分化作用最明显; Annexin A1和A2基因在HL-60细胞中低表达, 0.5 μmol/L 5-aza-2dC处理HL-60细胞72 h后, Annexin A1和A2基因mRNA表达水平明显上调, 而其启动子区域CpG岛甲基化水平明显降低。结论: 5-aza-2dC具有促进白血病细胞分化的作用, Annexin A1和A2基因启动子去甲基化可能与5-aza-2dC诱导白血病细胞分化有关。

关键词 [5-杂氮-2'-脱氧胞苷](#); [白血病](#); [Annexin A1](#); [Annexin A2](#); [甲基化](#); [分化](#)

分类号

## Effects of 5-aza-2'-deoxycytidine on cell differentiation and expression and methylation levels of Annexin A1 and A2 genes in leukemia cell line HL60

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Abstract

Objective To investigate the effects of methylation transferase inhibitor 5-aza-2'-deoxycytidine (5-aza-2dC) on the cell differentiation as well as the expression and methylation levels of Annexin A1 and A2 genes in human acute myeloid leukemia (AML) cell line HL-60. Methods HL-60 cells were treated with 5-aza-2dC. Following the drug treatment, the effect of 5-aza-2dC on the differentiation of HL-60 cell line was detected by Wright staining and flow cytometry (FCM); The expression of Annexin A1 and A2 was detected by reverse transcription-polymerase chain reaction (RT-PCR); The methylation levels of Annexin A1 and A2 genes were detected by methylation-specific-polymerase chain reaction (MSP). Results 5-aza-2dC enhanced the expression of cell differentiation antigen CD11b, induced HL-60 cells differentiation to mature granulocyte, increased the expression levels of Annexin A1 and A2, and decreased the methylation levels of Annexin A1 and A2 genes in HL-60 cells. Conclusion 5-aza-2dC could induce the differentiation of HL-60 cells. Demethylation of Annexin A1 and A2 genes might be related with the HL-60 cell differentiation induced by 5-aza-2dC.

Key words [5-aza-2'-deoxycytidine](#) [leukemia](#) [Annexin A1](#) [Annexin A2](#) [methylation](#) [differentiation](#)

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