

论著

丙烯酰胺对人白血病细胞HPRT位点的影响

刘胜学, 曹佳, 安辉, 周紫垣, 孙华明

第三军医大学预防医学系分子毒理实验室, 重庆 400038

收稿日期 1999-4-4 修回日期 1999-7-4 网络版发布日期:

摘要 目的:为了研究丙烯酰胺(AA)对人白血病HL-60细胞HPRT位点的影响作用。方法:本研究采用AA水溶液对HL-60细胞进行浓度梯度染毒,不同时间点进行单细胞微孔接种,在含6-TG培养基中筛选突变细胞,计数阳性克隆,测定接种存活率、克隆效率和突变频率。结果:AA染毒细胞的突变频率在处理剂量范围内具有明显的剂量-反应关系,在最高剂量组(700μg/ml)才有明确的致HPRT基因突变作用,同时发现AA染毒细胞的克隆效率随着剂量增加有轻度升高,这一现象可能与AA较强的细胞毒性有关。结论:AA具有较弱的基因损害能力。

关键词 [丙烯酰胺](#) [HPRT基因](#) [致突变作用](#) [HL-60细胞](#)

EFFECTS OF ACRYLAMIDE ON HPRT GENE OF HUMAN PROMYELOCYTIC LEUKEMIA CELLS

LIU Sheng-xue, CAO Jia , AN Hui , ZHOU Zi -yuan, SHUN Hua-mi n

Department of Molecular Toxicology, Third Military Medical University, Chongqing 400038, China

Abstract Purpose : To investigate the effects of Acrylamide (AA) on the HPRT gene of human promyelocytic leukemia cells. Methods : HL - 60 cells were infected with AA with different concentrations and put into single -cell wells at different time phases. Then the numbers of positive wells were counted and the cell plating efficiency , cloning efficiency and mutation frequency were determined. Results : the cell mutation frequency was positively correlated to the concentration. When the dose of AA rose up to the top (700μg/ml) , there was clear mutagenesis on HPRT locus. Meanwhile the cloning efficiency increased slowly to follow increasing of doses ,and this phenomenon might be related with the stronger toxicity of AA. Conclusion : The mutagenesis of AA was inferior.

Keywords [acrylamide](#) [HPRT gene](#) [mutagenesis](#) [HL - 60 cell](#)

DOI

通讯作者

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [\[PDF全文\]\(86k\)](#)
- ▶ [\[HTML全文\]\(0k\)](#)
- ▶ [参考文献](#)

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [Email Alert](#)

相关信息

- ▶ [本刊中 包含“丙烯酰胺”的 相关文章](#)
- ▶ 本文作者相关文章

- [刘胜学](#)
- [曹佳](#)
- [安辉](#)
- [周紫垣](#)
- [孙华明](#)