应用PCR产物直接银染测序技术检测大肠癌p53基因点突变

Detection of p53 Point Mutation in Colorectal Carcinoma Using PCR-product DNA Silver Sequencing

何友吉, 李明发, 单祥年 HE You-Ji, LI Ming-Fa, SHAN Xiang-Nina

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摘要 应用PCR-SSCP结合PCR产物直接银染测序技术对24例大肠癌p53基因第5-7外显子进行点突变的研究。结果 检出5例 (26.7%) 阳性, 均为错义突变; 其中3例为碱基GC到

AT的转换,1例为GC到TA的颠换,另1例为AT到CG的颠换,后者尚未见报道。突变位点分布在p53基因第141、175、245、248和258位密码子,其中4例发生在CpG位点。本文对p53基因点突变谱的分析为大肠癌的病因学研究提供了科学依据,并讨论了PCR产物直接银染测序技术的优越性。

Abstract: Mutations in exon $5^{\circ}7$ of p53 were screened in 24 cases of colorectal carcinoma by a combination of PCR-SSCP and PCR-product DNA silver sequencing. The results showed that all 5(26.7%) cases of point mutations detected were missense mutations, including 3 cases of GC to AT transitions, 1 case of GC to TA transversion and another case of AT to CG transversion. The latter has not been reported before. The mutations occurred at codons 141, 175, 245, 248 and 258 respectively, and 4 cases of these five mutations occurred at CpG dinucleotides. The analysis of p53 mutation spectra can provide clues to the etiology of colorectal carcinoma. The advantages of DNA silver sequencing are also discussed.

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- 何友吉
- 李明发
- · 单祥年HE You-Ji
 - LI Ming-Fa
- · SHAN Xiang-Nina

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