

# 转座子Tn233(CH)缺失突变株特性的研究<sup>1)</sup>

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**摘要** 将带有质粒pBR322::Tn233(CH) (抗药类型为Ap<sup>r</sup>Tc<sup>r</sup>Sm<sup>r</sup>Su<sup>r</sup>Hg<sup>r</sup>)的大肠杆菌C600ML (多聚酶I温度敏感突变株)在非允许温度条件下培养时,分离到12株营养缺陷突变型,其中10株的抗药类型为Sm<sup>r</sup>Su<sup>r</sup>Hg<sup>r</sup>,经质粒DNA提取与琼脂糖凝胶电泳分析表明,除1株(突变型3号)仍有质粒DNA外,其它9株细胞中的质粒DNA已不复存在。在12株中另外2株的抗药类型为Srt,rS.\_Ir(突变型19号与41号),它们也仍旧带有质粒DNA,经质粒抽提与限制性内切酶分析表明,这3种质粒(分别称为PTD3 }pTD”与pTD 11) DATA分别比pBR322: Tn233(CH)少了一些相邻的限制片段,经计算,pTD 3缺失了1.33kb,pTD19缺失了7822kb 3 pTD41缺失了9.09kb。从质粒的遗传图上可以看出,这3株缺失质粒都保留了pBR322载体上的DNA复制点与Tn233(CH)上的转座基因(TnpA),但是Tn233(CH)与pBR322相连处的两个末端反向重复顺序中的一个已经缺失,实验表明它们可能都失去了转座功能。对这些自发产生的缺失变种在转座子演化上的意义进行了讨论。

**关键词**

分类号

## Characterization of Deletion Mutants of Transposon Tn 233(CH)

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### Abstract

When Escherichia coli C600ML (DNA polymerase I temperature sensitive mutant, polA<SUB>ts</SUB>) carrying plasmid pBR322::Tn233(CH) (drug resistant pattern: Ap<SUP>r</SUP>Tc<SUP>r</SUP>Sm<SUP>r</SUP>Su<SUP>r</SUP>Hg<SUP>r</SUP>) was incubated at non-permissive temperature, 12 independent auxotrophs were isolated. Among them,the resistant pattern of 10 auxotrophs were Sm<SUP>r</SUP>Su<SUP>r</SUP>Hg<SUP>r</SUP>.Agarosegel electrophoresis of DNA from mutants showed that 9 mutants had lost their plasmid except one(auxotroph No.3). The resistant pattern of other two mutants were Sm<SUP>r</SUP>Su<SUP>r</SUP> (auxotrophs No.19 and No.41) which still retained plasmids. These three plasmid DNA.pTD3,pTD19 and pTD41 were deleted 1.33,7.22 and 9.09 kb respectively. The genetic map showed that all of the three deleted plasmid DNA retained the replication origin of pBR322 vector and transposition gene(TnpA), but one copy of the terminal repeated sequence flanking Tn233(CH) was deleted. Experiments also showed that they have lost their transposition ability. The significance of these deletions in the evolution of transposon was discussed.

### Key words

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### 扩展功能

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