

转座子Tn4, Tn3 与Tn233(CH) 之间转座功能互补与转座免疫的研究

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摘要

Tn4(S.ni`Stt'Ap'), Tn3(Ap') 与 '1'z,233((',H) (Sm'Su'Hg`) 是结构上相关而且都属于TnA家族的转座子。据报道1.'n4甲还含有一个拷贝的Tn3。为了弄清它们在家系甲的关系, 我们进行了Tn4, Tn3与Tn233(CH) 之间的转座功能互补与转座免疫的研究。结果如下: (1)当.Ln4以反式状态存在时, Tn233(CH) 转座功能缺失的 'npA一变种 (l'n233AE12) 的转座能力可以恢复, 但' 1 'n 3不能使之恢复二(2) Tn233(CH) 能转座到质粒R 144drd3 : : '1'n4或R144drd3 : : '1'n3上形成带二个转座子的质粒; (3) 带二个转座子的质粒会失去二种不同转座子中的一种。当寄主细胞在无抗生素的营养培养基上移种5----15次后, 仍带有二种转座子共存质粒8 144c1rd 3 : : 'n233 : : AE15 : : T n233oB5的细胞的百分率只有8.3%; 17此相比, 在相同的情况下, 带R144drd3::Tn4::Tn233(CH) 的细胞的百分率为71.2-86,2Vo1带R 144drd3 : : Tn3 : : Tn233(CI-3) 的细胞的百分率为96.2%o

关键词

分类号

Studies on Complementation of Transposition Function and Transposition Immunity Among Transposons Tn4, Tn3and Tn233 (CH)

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Abstract

Tn4 (Stnr sur Apr), Tn3 (Apr) and Tn233 (CH) (SrnrsurHg') are related
transposons, and all of them belong to the TnA family. It was reported that Tn4 contwains one copy of Tn3. In order to reveal their relationship of percentage, the complementation of transposition function and transposition immunity among Tn4. TO and Tn233 (CH) were studied. The following results were obtained: (1) Transposition ability of transposition defective mutants tnpA- of Tn233AE12 was restored by the presence of Tn4 in trans, but not by Tn3. (2) Tn233 (. CH) was able to transpoge to plasinid R144drd3 : : Tn4 or R1.44drd3 : : Tn3 to form plasmid carrying two transposons. (3) plasmid carrying two transposons will lose one of them eventually. After grown on antibiatic free nutrient medium for 5-15 series transfers, the percentage of host cells still harboring plasmids with two transposons R144drd3 : : Tn233AE15: : Tn233AB5 is only 8.3%, while the percentage of cells that still harboring the plasmid R144drd3 : : Tn4: : Tn233 (CH) is 71.2-86.2%and that harboring the plasmid R144drd3 : : Tn3: : Tn233 (CH) is 96.2%.

Key words

扩展功能

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