



转座酶对piggyBac转座子在弓形虫内转座活性的影响

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Effect of Transposase on the Transposition Activity of piggyBac Transposon Transfected into Toxoplasma gondii

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摘要 为研究转座酶(PBase)对转座子piggyBac在弓形虫细胞内转座效率的影响,将转座酶质粒Toxo-PBase和带红色荧光蛋白(RFP)的转座子质粒PB-Toxo-RFP共同电转染刚地弓形虫RH株速殖子,流式细胞仪检测转染后的弓形虫红色荧光蛋白的转座效率。结果显示,PB-Toxo-RFP和Toxo-PBase共转染组转座效率为73%,PB-Toxo-RFP转染组转座效率为43%,前组显著高于后组(P<0.01),表明转座酶能够提高piggyBac转座子在弓形虫细胞内的转座效率。

关键词: piggyBac转座子 转座酶 转座效率 刚地弓形虫

Abstract: To determine the transfection efficiency about PBase to piggyBac transposon in transfecting to Toxoplasma gondii, T. gondii RH strain tachyzoites were transfected with plasmid PB-Toxo-RFP which was expressed piggyBac transposon with a red fluorescent protein and Toxo-PBase plasmid which is a transposable enzyme. T. gondii tachyzoites were transfected with PB-Toxo-RFP plasmid alone as control group. The expression of red fluorescent protein was detected by flow cytometry at 24 h after transfection. The transposition efficiency in PB-Toxo-RFP+Toxo-PBase group and PB-Toxo-RFP group was 73% and 43%, respectively (P<0.01). It suggests that the PBase transposase can improve the transfection efficiency of piggyBac transposon in T. gondii tachyzoites.

Keywords: piggyBac transposon Transposase Transposition efficiency Toxoplasma gondii

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