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应用荧光原位杂交检测人凝血因子Ⅸ在转基因小鼠染色体上的整合

Detection of the Integration of Human FⅨ（hFⅨ）on Chromosomesof Transgenic Mice by Fluorescence in situ Hybridization

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摘要　应用荧光原位杂交（FISH）技术检测两个转基因小鼠家系从F1到F4代的整合情况。阳性转基因小鼠98%~100%的中期分裂相，85%~94%的间期核出现杂交信号；阴性对照小鼠100%的中期分裂相、95%~96%的间期核未出现杂交信号。结果表明,该FISH实验条件能对转基因整合位点进行高效特异检测。本文分析的两家系转基因小鼠均为单位点整合， 但整合位点不同。各家系内F1到F4代的转基因小鼠均可检出整合染色体，且整合位点相同，表明外源基因稳定整合并遗传给后代。

Abstract:Fluorescence in situ hybridization （FISH） was used to detect the integration of hFIX on chromosomes of transgenic mice from F1 to F4 generation in two strains.For transgenic mice, 98%~100% of metaphases and 85%~94% of interphases showed hybridization signal.For negative control mice, 100% of metaphases and 95%~96% of interphases showed no hybridization signal.The results demonstrated that FISH developed to detect the integration sites of hFIX was high efficient and specific.The integration sites of the transgenic mice analyzed were both single but different between the two strains.The integration chromosomes can be found in the transgenic mice from F1 to F4 generation and the integration sites were the same as each of the strains, which indicated that the transgene was stably integrated and transmitted to offspring.

关键词　荧光原位杂交(FISH)　人凝血因子Ⅸ（hFⅨ）　转基因小鼠　整合位点　Key words　fluorescence in situ hybridization (FISH)　transgenic mice　integration site　human clotting factor Ⅸ (hFⅨ)

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Abstract

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