

论文

SPRN转基因小鼠感染Scraipe鼠适应性病毒后动物行为与脑组织形态比较

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摘要:

通过建立Scraipe鼠适应性病毒感染Tg(sprn-B) / C57BL / 6转基因小鼠与C57BL / 6野生型小鼠, 观察鼠行为学及脑组织形态学的病理变化, 探讨Shadoo蛋白在感染过程中对小鼠学习记忆能力及中枢神经系统的影响。结果显示在Morris 水迷宫定位航行中, 4~7 d转基因感染组与野生型感染组的逃避潜伏期差异极显著(P<0.01); 空间探索试验中, 转基因感染组与野生型感染组的第1次穿越平台时间及穿越平台次数差异极显著(P<0.01)。HE染色观察鼠脑切片发现, 转基因感染组与野生型感染组相比, 海马、皮质、小脑空泡数量略少, 海马区锥体层细胞排列比较紧密, 细胞轮廓比较完整, 小脑浦肯野氏细胞清晰明显。

关键词: Scraipe鼠适应性病毒 SPRN 基因 Morris 水迷宫 组织形态学

Behavior and Histomorphology of SPRN I nfecte d with Adaptability Virus of Scraipe Mice

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Abstract:

Through establishing the animal models of both Tg(sprn-B) / C57BL / 6 transgenic mice and C57BL / 6 wildtype mice infected with adaptability virus of Scraipe mice, mouse behavior and pathological changes of histomorphology were observed and the effects of Shadoo protein on learning ability and central nervous system of mice in the process of infection were studied. The results show that escape latency of transgenic and wild type infection groups were significantly different (P<0.01) in the Morris water maze place navigation at 4, 5, 6, 7 days. In the spatial probe test, time of first crossing platform and crossing times of transgenic and wildtype infection groups were significantly different (P<0.01). Compared to wildtype infection group, the number of hippocampus, cortex and cerebellum of transgenic infection group was less, hippocampal pyramidal layer cells were closely arranged and their outline was integral, and cerebellar purkinje cells were clearly by HE staining.

Keywords: adaptability virus of Scraipe mice; SPRN gene; Morris water maze; histomorphology

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