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JNK在小鼠毛囊周期中的动态表达(PDF) 分享到:

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Title: Expression profile of JNK in mouse hair cycle

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关键词: JNK; 毛囊; 毛囊周期; 小鼠; 表达

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摘要: 目的 研究JNK在生后小鼠背皮毛囊周期中的表达规律及探讨其对毛囊周期的调控作用。 方法 选择生后不同时期（1、7、14、16、21、31 d）C57BL/6J小鼠54只，采用RT-PCR技术，检测JNK mRNA在小鼠背皮毛囊周期中的表达情况；采用Western blot和免疫组化技术，进一步检测JNK蛋白在毛囊周期中的表达规律。 结果 RT-PCR检测结果表明，在毛囊周期中，JNK1在生长早期（生后7、31 d）表达最强，退化期（生后16 d）和静止期（生后21 d）维持较弱的表达；JNK2在各时相点均有中等强度表达。单因素方差分析显示，JNK1的表达水平在生长早期（0.99±0.02）与静止期（0.30±0.01）间存在显著差异（P<0.05），JNK2在生长早期（0.77±0.01）与退化期（0.97±0.03）间存在显著差异（P<0.05）。Western blot与RT-PCR检测结果一致。免疫组化结果显示，在毛囊生长期，JNK主要表达于毛母质和外根鞘；进入退化期，JNK表达于外根鞘和上皮索；静止期毛囊中无表达。 结论 JNK在毛囊周期中呈动态表达模式，生长期JNK可能通过影响毛母质细胞的增殖和/或分化来调节毛囊生长；退化期JNK可能涉及毛囊细胞的凋亡过程。

Abstract: Objective To study the expression profile of JNK in hair cycle of the back skin in postnatal mice, and to explore the role of JNK in the regulation of hair cycle. Methods Fifty-four female C57BL/6J mice were divided according

to the time after birth, with their hair follicles in late development(P1), anagen phase(P7,P14,P31), catagen phase (P16) and telogen phase(P21). The expression level of JNK was detected by RT-PCR and the localization of JNK in different stages of hair cycle was tested by Western blotting and immunohistochemical staining (IHC). Results The results of RT-PCR showed that JNK1 was expressed strongly in the early anagen phase but weakly in the catagen and telogen phases, while JNK2 was moderately expressed in all stages. The results of one way analysis of variance showed that the JNK1 expression level was significantly higher in the early anagen phase (0.99 ± 0.02) than in the telogen phase (0.30 ± 0.01) ($P<0.05$), and the JNK2 expression level was significantly lower in the early anagen phase (0.77 ± 0.01) than in the catagen phase (0.97 ± 0.03) ($P<0.05$). The results of Western blotting and RT-PCR are consistent. The IHC results showed that JNK was mainly distributed in the outer root sheath (ORS) and matrix in the anagen phase, and was distributed in the ORS and epithelial cord in the catagen phase. There was no JNK expression in the telogen phase. Conclusion JNK, which is a dynamic factor in hair cycle, may be involved in the proliferation and/or differentiation of hair follicle matrix cells in the anagen phase, and may play a role in the apoptosis of hair follicle epithelial cells in the catagen phase.

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