



### Rho激酶抑制剂诱导PC12和PC12Adh细胞突起生长的差异比较

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### Differences of neurite outgrowth induced by rho kinase inhibitors between in PC12 cell line and PC12 Adh cell line

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全文: PDF (347 KB) HTML (1 KB) 输出: BibTeX | EndNote (RIS) 背景资料

**摘要** PC12细胞是研究神经分化最常用的细胞之一.在rho激酶(ROCK)抑制剂的作用下,PC12细胞能够长出神经样突起.最近,美国菌种保存中心(ATCC)同时提供PC12细胞和PC12 Adh细胞.研究的主要目的是观察ROCK抑制剂诱导这2种细胞长突起是否存在差异.PC12细胞和PC12Adh细胞按照ATCC方法进行培养,用神经生长因子(NGF,1000ng/mL)或ROCK抑制剂(33μmol/L Y27632,33μmol/L法舒地尔)处理细胞1~4d.结果发现NGF能够诱导这2种细胞生长突起,而ROCK抑制剂只诱导PC12Adh细胞长突起,对PC12细胞不明显.因此,ROCK抑制剂诱导这2种细胞突起生长存在明显差异,PC12Adh细胞更适合用于ROCK抑制剂的神经诱导分化实验.

**关键词:** rho激酶抑制剂 突起生长 PC12 Adh细胞 PC12细胞 神经生长因子

**Abstract:** PC12 cell line is one of the basic tool cell lines used in neural differentiation research.The cell line is able to grow neurite by exposure to rho kinase (ROCK) inhibitors.Recently,American Type Culture Collection (ATCC) provided PC12 cell line and PC12 Adh cell line.The main aim of the study was to clarify the differences of the two cell lines in neurite outgrowth induced by ROCK inhibitors.PC12 cell line and PC12 Adh cell line (from ATCC) were treated with nerve growth factor (NGF,1000ng/mL) or ROCK inhibitors (Y27632 of 33 μmol/L and fasudil of 33 μmol/L) for 1—4 days.NGF was able to promote neurite outgrowth both in PC12 cell line and PC12 Adh cell line,while ROCK inhibitors was able to do so only in PC12 Adh cell line.These results suggested that PC12 Adh cell line is more suitable for ROCK inhibitors study in neural differentiation.

**Key words:**

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