

论著

TRAIL在病毒损伤胰岛β细胞中的作用

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摘要 目的: 研究肿瘤坏死因子相关凋亡诱导配体 (TRAIL) 在病毒诱导的人胰岛β细胞损伤中的作用。方法: 用Annexin-V法检测比较柯萨奇B病毒 (CVB) 和风疹病毒 (RV) 引起的人胰岛β细胞系CM细胞凋亡, 再用可溶性TRAIL受体和抗TRAIL单克隆抗体进行阻断实验。结果: 5噬斑形成单位 (PFU) CVB3和CVB4作用CM细胞5 h导致30%以上CM细胞凋亡; 0.01 PFU CVB3和CVB4作用CM细胞24 h导致超过80%CM细胞凋亡; 10 PFU RV作用CM细胞24 h导致25%CM细胞凋亡; 4种可溶性TRAIL受体以及抗TRAIL单克隆抗体对CVB所致细胞凋亡有阻断作用。结论: CM细胞对CVB更为敏感, TRAIL参与CVB诱导的CM细胞凋亡。

关键词 [细胞凋亡](#); [胰岛](#); [风疹病毒](#); [柯萨奇病毒感染](#); [肿瘤坏死因子相关凋亡诱导配体](#)

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Effect of TNF-related apoptosis-inducing ligand on virus-induced apoptosis in a human islet β cell line

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Abstract

AIM: To study role of TNF-related apoptosis-inducing ligand (TRAIL) in virus-induced apoptosis in a human islet β cell line, CM cell line. METHODS: Using annexin-V assay to compare Coxsackie virus B (CVB)-induced apoptosis with Rubella virus (RV)-induced apoptosis in a CM cell line; using four kinds of soluble receptors of TRAIL and anti-TRAIL McAb to block the virus-induced apoptosis. RESULTS: 5PFU of CVB3 and CVB4 contacted with CM cells for 5 hours, there were more than 30% apoptotic CM cells; 0.01PFU of CVB3 and CVB4 contacted with CM cells for 24 hours, there were more than 80% apoptotic CM cells; 10PFU of CVB3 and CVB4 contacted with CM cells for 24 hours, there were only less than 25% apoptotic CM cells; soluble receptors of TRAIL and anti-TRAIL McAb could block CVB-induced apoptosis. CONCLUSION: CM cell line is more sensitive to CVB and TRAIL plays a role in CVB-induced apoptosis.

Key words [Apoptosis](#) [Islets of Langerhans](#) [Rubella virus](#) [Coxsackievirus infection](#) [TNF-related apoptosis-inducing factor](#)

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