心肌细胞微环境对K562细胞及NCI-H2452细胞增殖的抑制作用

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Title: Inhibition of cardiomyocyte microenvironment on proliferation of K562 cells and NCI-H2452 cells

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摘要: 目的：研究心肌细胞条件培养液（cardiomyocyte conditioned medium,CMCM）对K562细胞及NCI-H2452细胞增殖的影响，探索CMCM抑癌作用是否有肿瘤特异性，并探究其理化性质。方法：原代培养Wistar乳大鼠心肌细胞，以顺铂(DDP)作为阳性对照，CCK8法分析CMCM对K562细胞及人间皮瘤细胞NCI-H2452以及正常肝细胞HL7702体外增殖的影响。随后将CMCM采取不同比例稀释，探究稀释浓度与抑瘤作用间的关系。将CMCM采用胰酶消化，予以不同温度处理，以探究CMCM的理化性质。结果：K562细胞及NCI-H2452细胞分别与CMCM共同培养后，细胞存活率明显下降，与对照组相比差异均具有统计学意义(P<0.05)，而对正常细胞存活率无明显影响(P>0.05)。经胰酶消化及热处理后的CMCM活性仍然存在，CMCM对K562细胞的抑制作用具有时间及浓度依赖性。结论：CMCM可抑制K562细胞及NCI-H2452细胞的增殖，CMCM不能被蛋白酶所破坏，对热也稳定，抑制作用具有时间及浓度依赖性。

Abstract: Objective：To explore the effect of cardiomyocyte conditioned medium(CMCM) on the proliferation of K562 cells and NCI-H2452 cells，and to explore the tumor specificity of CMCM suppressor and its physicochemical properties.Methods：Primary culture of newborn Wistar rat cardiac muscle cells was established.Cisplatin was used as positive control for CMCM.CCK8 was used to analyze the effect of CMCM on the proliferation of K562 cells and NCI-H2452 cells and HL7702 of normal liver cells in vitro.CMCM was then diluted to different proportions to explore the relationship between dilution concentration and tumor inhibition.CMCM was digested with trypsin and treated at different temperatures to explore the physical and chemical properties of CMCM.Results：The cell survival rate of K562 cells and NCI-H2452 cells was significantly decreased after co-culture with CMCM，compared with the control group(P<0.05)，but there was no significant effect on the normal cells(P>0.05).After trypsin digestion and heat treatment，the activity of myocardial cell culture remained，and the inhibitory effect of CMCM was in a time-and dose-dependent manner.Conclusion：CMCM can inhibit the proliferation of K562 cells and NCI-H2452 cells.The active component of CMCM was found stable under different temperatures and trypsin.The inhibitory effect is time-and dose-dependent manner.

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