

兽医—研究报告

猪血源树突状细胞诱导培养与鉴定

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摘要:

摘要: 【目的】规范DCs诱导培养和鉴定的方法, 为研究相关病毒致病机制、制定相应的治疗与预防措施奠定技术平台。【方法】分离猪外周血单个核细胞(PBMCs), 贴壁细胞经一定浓度GM-CSF和IL-4诱导, 不同时间观察形态变化, 7天后收集所诱导的细胞, 经光镜、流式细胞术及激光共聚焦显微镜鉴定其形态、表面标志物CD1a/SWC3a; 利用双色流式细胞术检测DC MHC-II分子和CD80/86表达情况。【结果】试验结果显示, 所诱导的细胞具有典型树突状形态; 其表面CD1a/SWC3a双阳性率达到90.1%, MHC-II/CD80/86分子双阳性率达98.3%; 激光共聚焦显微镜观察细胞呈集落状, 细胞表面CD1a/SWC3a双阳性, 表明已经成功诱导出猪血源DC, 并获得诱导的标准程序, 为研究以DC为靶细胞的猪病毒性疾病免疫致病机理奠定基础。

关键词: 猪; 血源树突状细胞; 诱导; 鉴定

Induction and Identification of Swine Blood-derived Dendritic Cells

Abstract:

Abstract: 【OBJECTIVE】To standardize the method to induce and cultivate swine blood-derived dendritic cells( DC) in vitro, which could provide a technology platform for the study of related-viral diseases' mechanism and making the measures of their prevention and treatment. 【METHODS】Porcine peripheral blood mononuclear cells (PBMCs) were separated. The adherent cells of PBMCs on the flask were induced by GM-CSF and IL-4 and their shapes were observed by the optical microscope at different times. After 7 day, these induced cells were collected and their form and surface markers CD1a&SWC3a were identified by light microscope, flow cytometry and laser confocal microscope. The MHC-II and CD80/86 molecules on the surface of these cells were identified by bicolor flow cytometry. 【RESULTS】The results showed that the induced cells were dendritic, double-positive rates of CD1a/SWC3a and MHC-II and CD80/86 were 90.1% and 98.3% respectively. Colony-like cells were observed and the surface marker CD1a/SWC3a were double-positive under laser confocal microscope. 【CONCLUSION】The swine blood-derived DCs were induced successfully according to the analysis of phenotype and morphology. The standard procedure of the induction is acquired, which has laid a foundation for the research of immuno-suppression mechanism of porcine viral diseases that the target cells are DCs.

Keywords: swine blood-derived dendritic cells induction identification

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猪皮肤源树突状细胞在猪圆环病毒感染中作用

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