一個廣效性疫苗開發策略:以口蹄疫為研究模型

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摘 要

口蹄疫（Foot and Mouth Disease，FMD）會引起偶蹄類動物之惡性疾病更造成重大之經濟損失，因此，目前有多項新的生物技術正用來開發口蹄疫新型疫苗，但此些新開發中之口蹄疫疫苗仍存有缺失，所以本研究針對此些缺失試驗口蹄疫新型疫苗產製方法。 本研究以重組蛋白之技術為基礎來開發新型的O型口蹄疫疫苗，此新型疫苗將O型口蹄疫之4個主要抗原決定位分別以重複模板聚合?鏈鎖反應（template-repeated polymerase chain reaction，TR-PCR)的方式接合成多套（multiple copies）及單套（single copy)之DNA片段，後面再接上增強免疫反應之綠膿桿菌外毒素受體接合區Ia（the receptor binding domain Ia of Pseudomonas exotoxin A)之DNA片段，分別構築出能表現具多套及單套之O型口蹄疫病毒抗原決定位重組抗原蛋白質體。將這些質體轉型（transform)至BL21（DE3)菌株，以IPTG誘導蛋白質表現，接著將目標蛋白質粗純化後，混合油質佐劑免疫天竺鼠。經免疫後，天竺鼠血清中和抗體力價（serum neutralization titers，SNT）經分析結果顯示，經多套抗原決定位之重組抗原蛋白所誘導之中和抗體力價較單套者高。

關鍵詞 : 口蹄疫 ; 多套 ; 單套 ; 綠膿桿菌外毒素受體接合區Ia ; 重複模板聚合?鏈鎖反應 ; 血清中和抗體力價

目錄

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