

白點症病毒結構性蛋白質VP41B(ORF298)之特性分析

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摘要

白點症病毒 (White spot syndrome virus, WSSV) 為目前世界各地養殖蝦類中最具危害性之病毒性病原體，此病毒會造成蝦類與甲殼類動物造成高死亡率及嚴重的經濟損失。此病毒為一大型雙股DNA病毒，目前已有58個結構性蛋白質被鑑定出。本研究以針對白點症病毒之結構性蛋白質VP41B (WSSV-TW ORF298) 進行特性分析，白點症病毒結構蛋白質vp41B基因，包含903鹼基，可轉譯出300個胺基酸，預測其分子量為41kDa。VP41B重組蛋白質已表現，並利用重組蛋白質製備VP41B抗體。經西方墨點法分析病毒蛋白組成結果顯示VP41B為病毒外套膜蛋白，並在病毒拓撲學分析中顯示VP41B為位於外套膜內層之蛋白質。利用酵母菌雙雜交系統分析中發現VP41B會與12個白點症病毒結構性蛋白質具有交互作用，並大部分蛋白質為外套膜蛋白質；並且VP41B會與自體具交互作用現象，形成多種類型的聚合體；並且VP41B會與草蝦受體蛋白pmCBP、pmRACK1、與F1 ATP synthase beta subunit beta subunit beta subunit 具有交互作用。根據以上研究結果顯示VP41B可能對於白點症病毒之組成與細胞辨識扮演重要作用，進而幫助病毒進入到宿主細胞中。

關鍵詞：白點症病毒、VP41B、結構性蛋白質、交互作用

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