In this study, we characterized a novel white spot syndrome virus (WSSV) envelope protein, VP51A (WSSV-T1 ORF294), identified from a previous study. Membrane topology assay demonstrated that the VP51A 72 kDa protein is a type II transmembrane protein with a highly hydrophobic transmembrane domain on its N-terminal and a C-terminal that is exposed on the surface of virion. Co-immunoprecipitation, co-localization and yeast two-hybrid assays revealed that VP51A associated directly with some WSSV major structural protein, such as VP19, VP24 and VP26 and indirectly with VP28. Thus, these proteins may form a complex in the virion which may contribute to virus infection and to viral morphogenesis.

Keywords: WSSV; Structural protein; Envelope protein; Interaction


M. Makise, Y. Sueyasu, M. Takehara, T. Asano, and T. Mizushima. 2007. Yeast two-hybrid analysis of the origin recognition complex of...

Special Session on Shrimp Farming, Aquaculture '95. World Aquaculture Society, Baton Rouge, Louisiana, USA, 66-75.


Lotz, J. M., Browdy, C. L., Carr, W. H., Frelier, P. F., and Lightner, D. V. 1995. USMSFP suggested procedures and guidelines for assuring the...


Jiravanichpaisal, P., E. Bangyeekhun, K. Soderhall, and I. Soderhall. 2001. Multiple envelope proteins are involved in white spot syndrome virus (WSSV) infection in (Penaeus chinensis) against white spot syndrome virus (WSSV) challenge by double-stranded RNA.


Huang, J., J. F. Yuan, C. A. Cai, W. G. Gu, and Z. L. Shi. 2006. Multiple envelope proteins are involved in white spot syndrome virus (WSSV) infection in Penaeus monodon against WSSV challenge by dsRNA.


References...

參考文獻

1. 周宗錄, 2007。蝦白點症病毒結構性蛋白VP51A (ORF294)特性分析。私立大葉大學分子生物科技學系碩士論文。