

Virus-like particles of *Macrobrachium rosenbergii* nodavirus produced in bacteria

Abstract

Macrobrachium rosenbergii nodavirus (MrNv) infects giant freshwater prawns and causes white tail disease (WTD). The coding region of the capsid protein of MrNv was amplified with RT-PCR and cloned into the pTrcHis2-TOPO vector. The recombinant plasmid was introduced into *Escherichia coli* and protein expression was induced with IPTG. SDS-PAGE showed that the recombinant protein containing the His-tag and myc epitope has a molecular mass of about 46kDa and it was detected by the anti-His antibody in Western blotting. The protein was purified using immobilized metal affinity chromatography (IMAC) and transmission electron microscopic analysis revealed that the recombinant protein assembled into VLPs.

Keyword: Virus-like particles; Nodavirus; Nodaviridae; Cloning; Purification; Expression