# Analysis of the Polyhedrin Gene of *Spodoptera litura* Nucleopolyhedrovirus Isolated in Korea

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The cotton leafworm, *Spodoptera litura*, is an important pest of crops and vegetables in Korea, China and Southeast Asia. *S. litura* nucleopolyhedrovirus (SlNPV) infects only a single host, *S. litura*, and it has been successfully applied as commercial biological insecticide against this pest in China. The isolation or characterization of SlNPV has not been reported yet in Korea. A local strain of SlNPV was isolated from infected *S. litura* larvae. The partial polyhedrin gene of SlNPV-K1 was successfully amplified by previous reported degenerate PCR primer set for the polyhedrin gene. The amplified PCR product was cloned and sequenced. The sequencing results showed that the PCR product was a fragment of corresponding polyhedrin gene. Southern blot analysis of SlNPV-K1 restriction fragments was performed by using 430bp polyhedrin PCR product of SlNPV-K1 as a probe. As the result, we identified the location of the polyherin gene within the approximately 6Kb *Eco*R I, 3.5Kb *Hind* III, 20Kb *Xho* I and 4Kb *Cla* I fragments, respectively. The *Cla* I 4Kb fragment was cloned and the nucleotide sequences of the polyhedrin coding region and its flaking regions were determined. Nucleotide sequence analysis indicated the presence of an open reading frame of 747 nucleotides which could encode 249 amino acids with a predicted molecular mass of 31 kDa. The nucleotide sequences within the coding region of SlNPV-K1 polyhedrin shared 94.0% similarity with the polyhedrin gene from previous reported SlNPV but were most closely related to *Spodoptera littoralis* NPV with 99.0% sequence identity.