Identification of Novel Insecticidal Genes from *Bacillus thuringiensis* Strains Isolated in Korea

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To identify novel *cryI*-type crystal protein genes, 100 *Bacillus thuringiensis* (Bt) isolates were selected on the basis of their toxicity against *Bombyx mori* and *Spodoptera exigua* larvae. For the search of a large quantity of novel genes simultaneously, furthermore, Bt isolates were randomly divided into 2 groups including 50 isolates each. The isolates of each group were cultured individually and the isolates harvested in each group were mixed one tube. Universal oligonucleotide primers, ATG1-F and N400-R, were designed to probe the most conserved regions of all known *cryI*-type gene sequences. About 2.4 kb PCR fragments amplified from each group with the primer set and were cloned into pGemT-easy vector for sequencing. The result revealed that these clones separate 6 distinct patterns based on the restriction fragment length polymorphism (RFLP) analysis. One of them, A32 clone showed 87% nucleotide and 91% deduced amino acid similarity with the known *cryIE* gene. For further characterization of the novel gene, its expression using baculovirus or *E. coli* expression system and bioassay are under performance.