

2-13. Identification of Novel Crystal Protein Gene  
from a Strain of *Bacillus thuringiensis* subsp.  
*kenyae*

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*Bacillus thuringiensis* 2385-1, which showed toxicity to lepidopteran but not to dipteran was isolated from Korean soil sample and characterized. The H-serotype of 2385-1 was identical to that of serovar *kenyae* (H4a4c), and its crystal toxin was bipyramidal-shaped with a molecular weight of 130 kDa. However, the plasmid profile of 2385-1 was different from that of serovar *kenyae*. Therefore, to verify the  $\delta$ -endotoxin gene types of 2385-1, PCR-RFLP analysis using universal primers, K5un2 and K3un2, which could amplify all possible *cryI*-type gene was performed. This result revealed that 2385-1 contains two novel *cryI*-type toxin genes in addition to *cryIJa1* gene, and these were named *cryI-208* and *cryI-210*. In the nucleotide sequence analysis of these novel toxin genes, *cryI-208* and *cryI-210* were showed 87.6% and 89.6% of maximum homologies with *cryIAc* and *cryIAe* gene, respectively.