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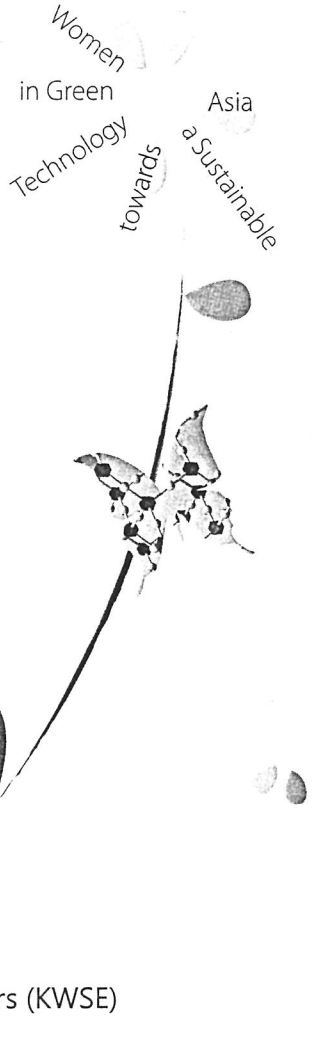
Abstract



The Association of Korean Woman Scientists and Engineers (KWSE)

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MOLECULAR CLONING OF A CHITINASE GENE FROM VIBRIO SP. KOPRI 11027

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The *chiK* gene encoding a chitinase ChiK was cloned from *Vibrio* sp. 98CJ11027 using PCR method. The *chiK* open reading frame is 2553 bp long encoding a ChiK precursor protein, which contains 850 amino acids including a N-terminal signal peptide consisted of 21 amino acids. Using inverse PCR cloning method, we identified the 6.0 kb DNA fragment containing the *chiK* gene. Subsequently, a 3042 bp of full *chiK* gene was cloned by PCR cloning, and then it was subcloned into pGEM T-easy vector, designated as pChiK. The recombinant *E. coli* JM109 clone harboring recombinant pChiK produced a clear halo around the colony in the colloidal chitin plates. The deduced amino acid sequences of ChiK revealed 89% identity with those of *Vibrio harveyi* chitinase. Comparison of the conserved module reveals that chitinase of KOPRI 11027 strain (ChiK) belongs to the family 18 of glycoside hydrolases.