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Cloning and nucleotide sequence analysis of nahG encoding salicylate hydroxylase from NAH plasmid of Pseudomonas fluorescens SME11

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Pseudomonas fluorescens SME11 was isolated from waterwaste and it carried NAH plsmid. To clone *nahG* gene encoding salicylate hydroxylase, we used PCR method 1.6 kb DNA fragment which obtained from PCR was inserted to pT7Blue(R) vertor and resulting recombinant DNA was named pNY1. The resulting clone containing the recombinant plasmid was able to convert salicylate to catechol and produced color in colony, caused by accumulation and auto-oxidation of catechol. Restriction endonuclease mapping of 1.6 kb size of insert of the recombinant plasmid was carried out with EcoRV, Kpn I, Pvu II, Stu I. By means of unidirectional ExoIII deletion and dideoxynucleotide chain termination, we determined the nucleotide sequence of the DNA fragment containing nahG gene. One open reading frame of 1305 bp corresponding to 434 amino acids was found. Deduced amino acid sequence of the *nahG* gene showed 84.1%, 71.4%, 48.7% and 26.8% homology to that from *P.putida* KF715, *P. putida* PpG7, P.putida S-1 and
Sphingmonas sp. respectivley.