Cloning and Sequencing of Hydroxylase Genes Involved in Taxol Biosynthesis

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Two full-length cDNAs (TCH1 and TCH2) were obtained from a cDNA library of Taxus chinensis mainly by the single specific-primer PCR (SSP-PCR) method. Compared with other reported enzymes from Taxus species, the deduced amino acid sequences of TCH1 and TCH2 exhibit significant homologies to hydroxylases that are involved in taxol biosynthesis. These findings imply that the two new genes are closely related to the biosynthesis of taxol/taxoids. Data Accession No: AF545833 and AY374652.

Key words: Taxol Biosynthesis, Hydroxylase, SSP-PCR