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Epoxide Hydrolase-catalyzed Asymmetric Enantioselective Resolution for the Production of Chiral Epichlorohydrin

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Enantiopure epoxides are important chiral synthons in organic synthesis and can be usefully used as key building blocks for the production of optically active compounds. Various chemical and biological methods have been developed for the production of chiral epoxides. Epoxide hydrolase (EH) catalyze the enantioselective hydrolysis of racemic epoxides to corresponding diols. A recombinant *Pichia pastoris* with EH from *Rhodotorula glutinis* has been constructed by reverse transcriptase-polymerase chain reaction (RT-PCR). This recombinant EH and wild-type yeast including newly isolated *Rhodospiridium* sp. have been tested as a potential biocatalyst for the preparation of chiral epichlorohydrin.

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