Recombinant Gen of Encoding b-Xylosidase from Geobacillus Thermoleovorans IT-08 in pHIS1525 Plasmid

Abstrak:

Plasmid pHIS1525 is a shuttle vector for E. coli/ B. megaterium, which contains a signal peptide for secretion of heterologous proteins, and also equipped with a His-tag encoding sequence. The aim of this research was to recombine the &beta;-xylosidase encoding gene from G. thermoleovorans IT-08 into plasmid pHIS1525. The &beta;-xylosidase encoding gene (xyl) was amplified by PCR method from pTP510, a recombinant plasmid containing xylanolytic enzyme encoding gene from G. thermoleovorans IT-08. The xyl gene was inserted into plasmid via MCS of pHIS1525 between SacI and SphI restriction sites and propagated in E. coli DH10b. The recombinant plasmids were analyzed by restriction analysis and sequencing. This research showed that the xyl gene was successfully amplified from pTP510 and recombined into plasmid pHIS1525 in E. coli DH10b. The sequence of the inserted gene contained a signal peptide and His-tag encoding sequences. The recombinant plasmid was called pSMX.

Keyword:

b-xylosidase, Geobacillus thermoleovorans IT-08, pHIS1525, E. coli DH10b

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