從嗜熱澱粉芽孢桿菌MG73發現新的膜結合木聚醣?」妖S性研究

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摘 要

本論文從廚餘堆肥中分離出具有分解木聚醣(xylan)的菌株MG73，經16S rDNA 定序後發現此一細菌與嗜熱澱粉芽孢桿菌(Bacillus thermoamylovorans)菌種最為相似；同時本論文發現Bacillus thermoamylovorans MG73 的木聚醣.是一新種的膜結合型木聚醣.，所以我們對於新的木聚醣.進行酵素活性分析(zymogram)以探討此木聚醣的分子量，以及測定其最佳工作環境，例如溫度、pH 值、熱穩定性和金屬離子的影響分析。研究結果表示，Bacillus thermoamylovorans MG73 所產生的木聚醣.其分子量大小為60 kDa，最佳工作環境為100 ° C, pH10，熱穩定性方面則是在100 ° C 處理兩小時後活性仍有80%以上，對於新的木聚醣.來說金屬離子是非常重要的，特別是錳和鎳，然而，較高的離子濃度會降低木聚醣.的活性。本論文之結果是第一個發現於革蘭氏陽性菌中膜結合木聚醣.之研究。

關鍵詞 : 木聚醣.，嗜熱澱粉芽孢桿菌，膜結合，酵素活性電泳分析

目錄

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