Bacillus sp. DYU-Too 20之幾丁質分解?◆PN-乙醯幾丁寡醣

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摘 要

本研究從新竹市篩選出菌株Bacillus sp. DYU-Too 20，進行其生合成N-乙醯幾丁四醣之最適化培養條件探討與幾丁質?純化與特性分析。 最適化條件探討，發現以α-幾丁質粉末為碳源時，可生合成N-乙醯幾丁四醣，並於α-幾丁質含量4%時，有較高N-乙醯幾丁四醣產量，為0.144 g/L；以NH4Cl為氮源時，N-乙醯幾丁四醣產量高以於其他氮源培養時，濃度為0.1 g/L NH4Cl培養時，N-乙醯幾丁四醣產量較高，為0.256 g/L；溫度以35℃培養時，N-乙醯幾丁四醣產量較高，為0.284 g/L。 當以含4% α-幾丁質、0.1 g/L NH4Cl之CB (chitin broth)培養基於35℃下，培養菌株Bacillus sp. DYU-Too 20，可誘導菌株分泌幾丁質?。其粗酵素液經硫酸銨沉澱、透析與陰離子膠體 (DEAE-Sepharose CL-6B)層析後，發現DEAE-Sepharose層析之第83-95管之酵素液具有幾丁質?波峰，因此將其加入膠態幾丁質溶液，進行水解，離心後凍乾上清液，以HPLC分析其成分，發現水解產物以N-乙醯葡萄糖胺、N-乙醯幾丁二醣與N-乙醯幾丁四醣為主。電泳分析幾丁質?的分子量為26 kDa。

關鍵詞 : 幾丁質分解?｛BBacillus sp. DYU-Too 20、N-乙醯葡萄糖胺、N-乙醯幾丁二醣、N-乙醯幾丁四醣、最適化培養條件

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