富含降血脂機能性胜?忖妊J白質開發

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摘 要

醫學報導指出，造成心血管疾病及肥胖的主要原因是血脂肪(serum triglyceride level)太高，其次才是膽固醇。造成高血脂症的主要原因大都是因為脂肪代謝不正常，高血脂症好發於中年人身上，主要會引起心臟冠狀動脈硬化，因此，如何預防高血脂症將是首要。故日本Hankyu-kyoei Bussan公司從豬的血清蛋白?水解液中，分離出具有降低血脂肪功能的寡胜?Val-Val-Tyr-Pro (VVYP)，並證實VVYP胜?能抑制腸道中脂肪的吸收，同時增強肝臟中三酸甘油脂脂解? (hepatic triglyceride lipase) 的活性，以達到排泄體內原有過多的脂肪。為了建立有效的VVYP胜?生產方式，利用Aspergillus oryzae alpha-amylase作為生產VVYP胜?的攜帶者。因此，本研究在不影響A. oryzae alpha-amylase 的立體結構及活性之下，將多套VVYP轉成的DNA序列置換到A. oryzae alpha-amylase基因中，並定序確認。回收VVYP-amylase蛋白?，經由trypsin與carboxypeptidase B水解後的液體，利用LC-MS-MS分析VVYP產生的情形，確認VVYP-amylase的蛋白?水解液中含有VVYP胜?。實驗結果顯示，將含有四套VVYP-amylase重組基因的A. oryzae (pD3456H)培養20天時，其alpha-amylase活性及VVYP-amylase蛋白分泌量均最高，並估算1公升的A. oryzae (含有VVYP-amylase重組基因的pD3456H) 培養後的上清液可生產1.25克VVYP- amylase蛋白。

關鍵詞 : 降血脂機能性胜? ; 澱粉? ; 絲狀真菌

目錄

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