Secretory expression of glucose oxidase gene in a yeast expression system

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Glucose oxidase (GOX) gene from Aspergillus niger was expressed in a yeast and purified. With specific primer set for GOX gene, 1.7 Kb of DNA fragment containing the coding region of glucose oxidase (GOD) from A. niger KCTC 6278 was amplified and the amplified DNA fragment was digested with restriction enzymes and inserted into a yeast expression vector, pGAPZ C. The GOD gene cloned vector was then transfected into Pichia pastoris X-33, and the transformed yeast was selected on YPD agar plate containing Zeocin. GOD activity was detected in the culture supernatants of GOX gene transformed P. pastoris X-33. The expressed GOD protein was purified with affinity chromatography and represented single band on SDS-PAGE.