

Identification of a Delta 5 fatty acid Desaturase from *Thraustochytrium aureum* BK1 by heterologous expression in *Pichia pastoris*.

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Abstract

Delta 5 fatty acid desaturase converts di-homo-gamma linoleic acid(DGLA 20:3 ω6) to arachidonic acid(AA 20:4 ω6). Primers were designed on the basis of DNA sequence of known desaturase gene of several organisms in order to isolate delta 5 desaturase, and PCR was performed to obtain fragment 1.3kb using designed primer finally this fragment was expressed in *Pichia pastoris* GS115 and identified to be delta 5 desaturase by analysing the conversion of DGLA to AA by means of gas chromatography.

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