

Expression, purification and crystallization of herbicide-resistant PAT protein for structural analysis

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Development of genetically modified (GM) crops has rapidly increased in last few years. The most widely grown GM crops express genes that confer herbicide tolerance and insect resistance. Detection system of GM crops is important for safety evaluation for its consumption. Detection would also help in assessing the quality of modified crop. In this research, *bar gene* (PAT protein, herbicide resistant) was cloned in pGEX-4T-1 and expressed by *E. coli*. The protein was purified by GSTrap and set up for crystallization. The crystal structure would provide detailed analysis of binding and active site of this protein useful for protein-aptamer interaction.