EXPRESSION OF THE GENE REPAIR scMUTM1 FROM SUGARCANE IN *E. COLI*

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The scMutM1 gene was identificated through the Sugarcane Genoma Project (Sugarcane Expressed Sequence Tag - SUCEST/FAPESP). This gene product is involved in the Repair Excision Bases pathway and act like a DNA glycosylase. This work had as main aim to obtain the gene expression of scMutM1 to posterior funcional and structural caracterization of the protein. With this purpose the construction pBC+scMutM1 was made. After this procedure the competent bacterial cepa CC104 deficient in MutM and MutY was used to transformation by electroporation. The expression was induced with isopropyl-beta-D-thiogalactopyranoside (IPTG) at 37ºC, under agitation overnight. Cultures of CC104*mutMmutY* not transformeds and transformeds with the vector pBC and with the construction pBC + scMutM1 had been induced. After this step, the cells had been centrifugated and ressuspended in buffer lysis, and with this material was performed a polyacrylamide gel electrophoresis at denaturating conditions. To visualize the total proteins, the gel was stained with comassie blue. With the SDS-PAGE gel analysis, it was observed the appearing of a band from the construction pBC+scMutM1, whose molecular weight is equivalent to the waited to scMutM1. In the other samples (negative controls) this band was not observed, what indicate that the cDNA scMutM1 was expressed in *E. coli*.

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