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# Production and characterization of a monoclonal anti-glutathione-S-transferase(GST) antibody

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Analysis of protein is often frustrated by the inability to isolate large amounts of purified protein from a native source. To overcome this problem, fusion protein expression systems such as pGEX system have been widely used. Using pGEX system, the desired protein could be easily obtained in a large amount in E.coli , and then the fusion protein could be used for the study of the function of the given protein. To analyze and purify the GST fusion protein, anti-GST antibody could be used as one of the system of choice. However, the production and characterization of monoclonal anti-GST antibody has not been studied extensively yet. To produce monoclonal anti-GST antibody, GST was purified from E.coli transformed with pGEX-cs, one of the pGEX system and was used as an antigen. The monoclonal antibody was produced by fusion of the immunized spleen cells with SP2-0 myeloma cells. The antibody was characterized by ELISA, western blotting, etc. The monoclonal antibody produced in this study (mAb-GSTA) showed strong and specific immunoreactivity against not only GST but also GST-fusion proteins. Also, mAb-GSTA was successfully used for the immunoaffinity purification of the GST $\beta$-Rc.- third intracellular-loop fusion protein. The results of the present study suggest that mAb-GSTA may be used for the identification and purification of GST fusion proteins.