

Immobilization of cystein-tagged Protein G on amine modified silica coated magnetic nanoparticles

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This work reported the immobilization of cystein-tagged Protein G onto amino modified magnetic nanoparticles(MNPs) for control and enhancement of antibody orientation and immobilization. Portein G was obtained from genetic engineered Streptococcus aureus as an activated site for antibody and magnetic nanoparticles were used the 30nm of silica-coated iron oxides. The overall process involved the conjugation of amino-functionality of MNPs and thiol group of cross-linker in N-terminal of protein G. The conjugation efficiency was calculated over 40%. The synthetic routes was confirmed by the detailed characterization such as ATR FT-IR, and DRIFT UV-Vis.