

Molecular Biotechnology Programme

Uppsala University School of Engineering

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Title (English)

Author

Development of an assay for quantification of anti-dsDNA autoantibodies using CD microlaboratories

Title (Swedish)

Abstract

The presence in serum of anti-dsDNA autoantibodies is one of the diagnostic criteria for systemic lupus erythematosus. A microfluidic method for detection of these antibodies was developed using the Gyrolab BioaffyTM platform. Immobilized synthetic dsDNA was utilized for capture of sample antibodies, which were then detected by fluorescence-labeled secondary antibodies. The anti-dsDNA antibody levels in eighty-one serum samples were determined and the results compared to those obtained with a standard method, *Crithidia luciliae* immunofluorescence. The BioaffyTM based method appears promising, producing specific and reproducible results with less time and effort than the conventional assays.

Keywords

Antibody assay, systemic lupus erythematosus (SLE), autoantibody, anti-dsDNA antibody, Gyrolab BioaffyTM, *Crithidia luciliae* immunofluorescence (CLIF)

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