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Measurement of Urine Albumin Levels With A Monoclonal Antibody Based in-House Elisa

Cemalettin AYBAY

Resul KARAKUŞ

Department of Immunology, Faculty of Medicine, Gazi University

06500, Beşevler, Ankara - Turkey

 [Keywords](#)  
 [Authors](#)



[medsci@tubitak.gov.tr](mailto:medsci@tubitak.gov.tr)

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**Abstract:** Microalbuminuria is considered to be an early indicator of diabetic nephropathy. We have previously reported the establishment of A-HAlb/98 hybridoma secreting monoclonal antibody that specifically recognizes human serum albumin (HSA). In this report, an in-house enzyme-linked immunosorbent assay (ELISA) was developed using this antibody for the measurement of urinary albumin (UA) and UA was examined in 24 different samples. A-HAlb/98 was used as the capture antibody by immobilizing onto microtitre plates in ELISA format. HSA-specific polyclonal rabbit immunoglobulin was labelled with biotin and then used as the tracer antibody. The dynamic assay range of ELISA for albumin was established to be 10-1000 ng/ml, and the albumin levels determined by ELISA were well correlated ( $r = 0.8831$ ) with those obtained by the liquid-phase immunoprecipitation method (The Orion Diagnostica TURBOX® U-albumin assay). The ability of this in-house ELISA to quantitate UA in nanogram ranges makes it a favourable candidate for utilization in diagnostic applications as well as in research studies.

**Key Words:** Human albumin, Monoclonal antibody, Polyclonal antibody, ELISA

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