

Evaluation of an enzyme-linked immunosorbent assay for the diagnosis of Chagas' disease using synthetic peptides

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An enzyme-linked immunosorbent assay (ELISA) has been developed to detect antibodies in human sera to synthetic peptides derived from the repeating amino acid sequence in recombinant *Trypanosoma cruzi* antigens. Sixty serum samples from patients with chronic Chagas' disease were used to determine the reactivity against the synthetic repeat peptides derived from clones 1, 2, 30, 36, and shed acute phase antigen (SAPA). Ninety-eight percent of the samples had detectable antibodies to one or more of the synthetic peptides at titers $> 1:100$. The percentage of reactive sera increased from 28% with peptide SAPA to 93% with peptide 2. The exposure of patients to *T. cruzi* was reflected in indirect immunofluorescent antibody titers to fixed epimastigotes. Comparisons between ELISA and immunoradiometric assay data indicated that both tests were of approximately equal sensitivity.