Development of a Rapid Capture ELISA Using PCR Products and the PinPoint™ System

ABSTRACT

A simple procedure for the development of an ELISA is presented. The procedure uses the PinPoint™ Xa-1 T-Vector System to express a protein antigen encoded by a PCR product. Because the PinPoint™ System adds a biotin tag to the protein, a single-step purification by affinity for streptavidin allows direct use in ELISA. We report the use of this procedure to express a recombinant protein from the nucleocapsid domain of the feline foamy virus (FeFV) gag gene, fused with a biotin tag. This fusion protein was applied directly to streptavidin-coated ELISA wells. Antibody to FeFV was detected in this ELISA with a 100% correlation to other detection methods, including immunoblot, serum neutralization and virus isolation.

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