

A Latex agglutination test for capripoxvirus

Abstract:

The gene Q13L coding for the Capripoxvirus group specific structural protein P32 was expressed in *Escherichia coli* using plasmid pGEX-2T as a fusion protein with glutathione-s-transferase and purified on glutathione sepharose affinity chromatography column. The protein was then employed for diagnosis of sheeppox, goatpox and lumpyskin disease, by a latex agglutination test (LAT) using the purified P32 antigen and guinea pig detector antiserum raised against the P32 antigen. The LAT and virus neutralization test (VNT) were used to screen one hundred livestock field sera for antibodies to Capripoxvirus, in comparison the LAT was simpler, rapid and 23% more sensitive than the VNT. In addition the LAT was found to be specific for Carpripoxvirus because it did not pick antibodies to Orthopoxvirus and Parapoxvirus. The LA test can be taken for a simple and quick diagnostic tool for primary screening of Carpripoxvirus infection and will reduce the reliance of diagnostic laboratories on tissue culture facilities.