

Immune lysis of *Trypanosoma congolense*: generation of a soluble covalent complex of variant surface glycoprotein and bovine complement component C3b

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ABSTRACT

Organisms of *Trypanosoma congolense* variant antigenic type TC 13 (VAT TC 13) were incubated, at 37°C for 60 min, with fresh bovine serum in the presence of antibody specific for the variant surface glycoprotein (VSG). Upon immune lysis, soluble VSG (54 kDa) and a larger complex (about 225 kDa), containing VSG, was detected in the supernatant fluid of the mixture. Neither soluble VSG nor the VSG complex were detected when fresh bovine serum was incubated with organisms of *T. congolense* in the absence of specific antibody. Within a narrow range of low antibody concentration, the release of soluble VSG and the formation of the VSG complex were correlated with the amount of specific antibody added to the mixture. The VSG complex could be precipitated with rabbit anti- bodies specific for VSG of VAT TC 13 or antibodies specific for bovine complement e3. The VSG complex was detected by Western blot with rabbit anti-VSG of VAT Tct J as well as rabbit anti-bovine cs. The complex was found to consist of VSG covalently bound to bovine complement component C3b. Potential pathophysiological implications are discussed.

Keyword