PRODUCTION OF POLYCLONAL ANTIBODIES DIRECTED AGAINST RECOMBINANT PROTEINS OF BIOTECHNOLOGICAL INTEREST

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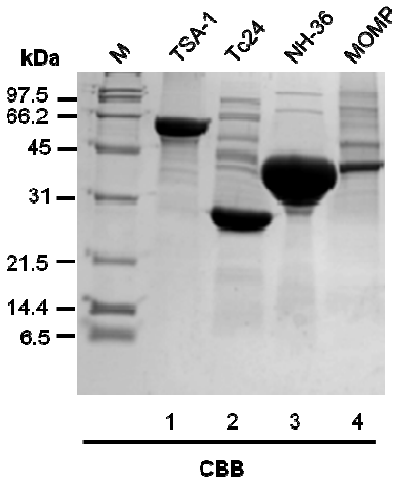
Introduction. The production of recombinant proteins of microorganisms such as: *Chlamydia trachomatis, Trichomonas vaginalis, Trypanosoma cruzi,* and *Leishmania donovani* is an important step to generate enough amounts of proteins for cellular, biochemical, and functional studies. These studies can lead to the identification and characterization of virulence factors to understand the pathogenicity of these microorganisms. They can also help to identify biomarkers and antigens for the development of diagnostic tools and to test them as vaccines candidates. During the development of the biotechnological processes for the protein expression, purification and refolding, it will be ideal to count with the aid of particular biological tools such as specific polyclonal antibodies.

The aim of this work was to obtain polyclonal antibodies directed against TSA-1 Tc24 of *T. cruzi,* NH-36 of *L. donovani*, MOMP (1) of *C. trachomatis* (2), and TvLEGU-1 of *T. vaginalis* (3, 4) with potential biotechnological applications on human health.

Methods. For production of polyclonal antibodies, 1.5 kg New Zealand male rabbits were used. Rabbits were intramuscularly immunized three times in two-week intervals with 150 μg of the specific recombinant antigen mixed with the Titer-max gold adjuvant in a 1:1 ratio. Rabbits were bleeding every 15 days to evaluate antibody production by Western blot assays against the individual recombinant antigens (4).

Results. After following the immunization schedule described above, in a Western blot assay the individual serum recognized the corresponding recombinant protein band (WB), as compared with the CBB protein pattern (CBB).



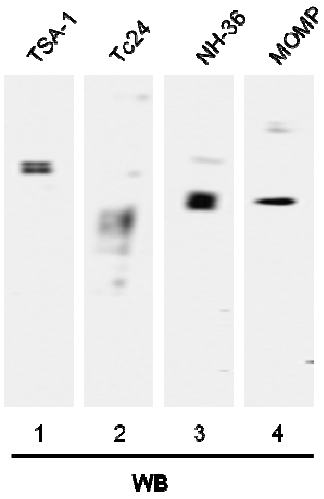


Figure 1. SDS-PAGE of Coomassie brilliant blue-stained gels (CBB) and Western blots (WB) of recombinant proteins using the antibodies produced against each one of them. Lanes 1 and 2, TSA-1 and Tc24 of *T. cruzi,* lane 3 NH-36 of *L. donovani*, and lane 4, MOMP of *C. trachomatis*. M, Protein bands of the wide-range molecular weight standards.

Conclusions. Antibodies raised against distinct recombinant proteins will serve as important tools for monitoring the biotechnological processes used during the massive production of these recombinant antigens for vaccine and diagnosis usage.

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