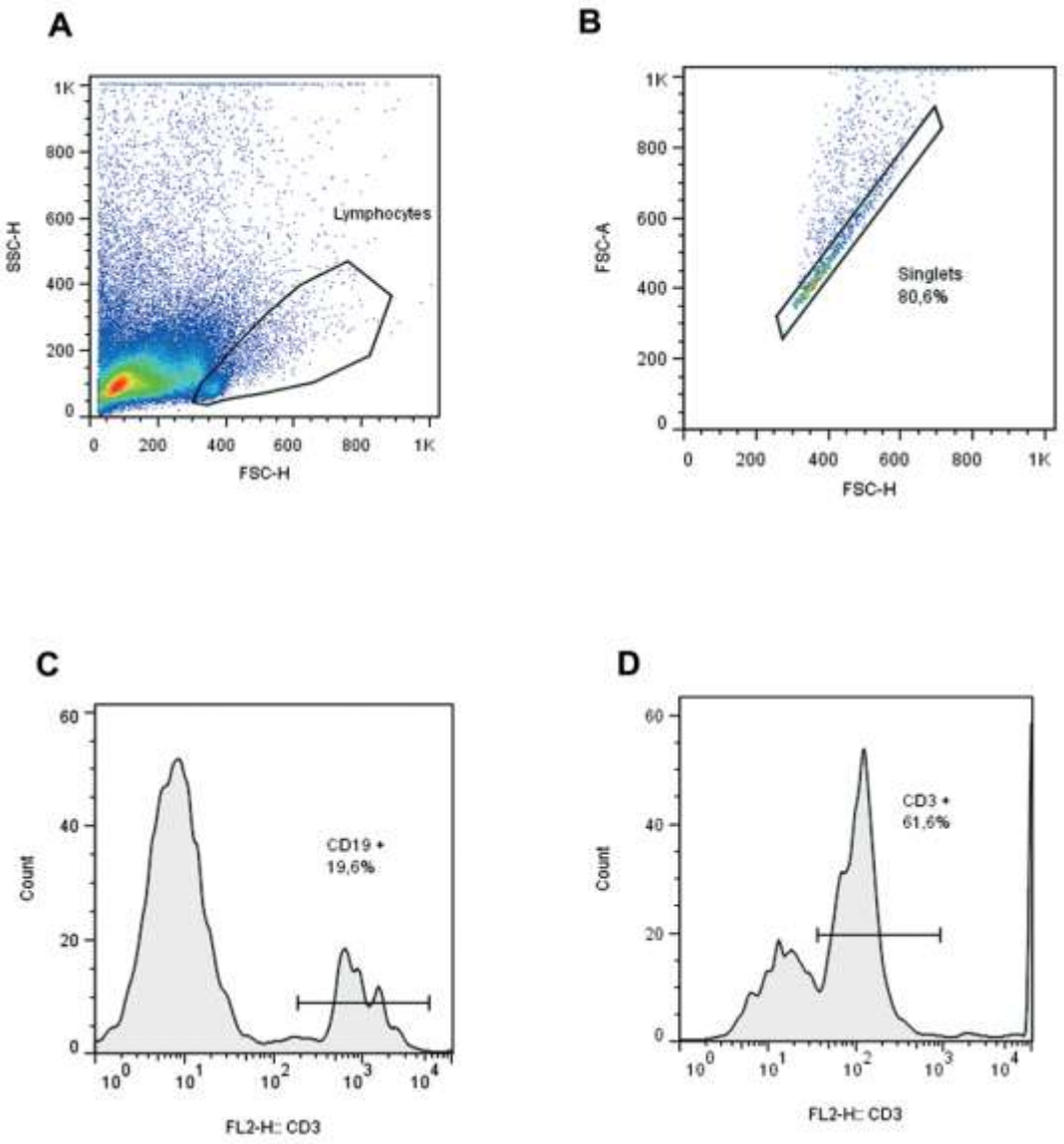
Supplementary Figure 1:

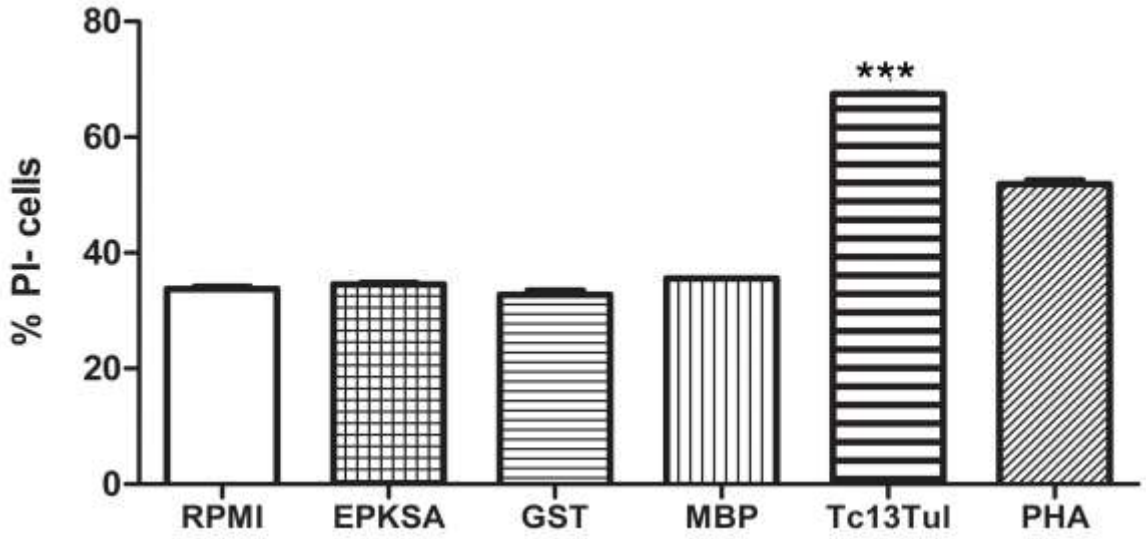
Representative gating strategy of lymphocyte population.



(A) Lymphocytes were gated by side scatter (SSC-H) versus forward (FSC-H) scatter channels. (B) The singlets were analysed by the use of forward scatter area (FSC-A) vs. forward scatter height (FSC-H) dot-plot. Frequencies (%) of (C) CD19+ and (D) CD3+ were analyzed with specific antibodies.

Supplementary Figure 2:

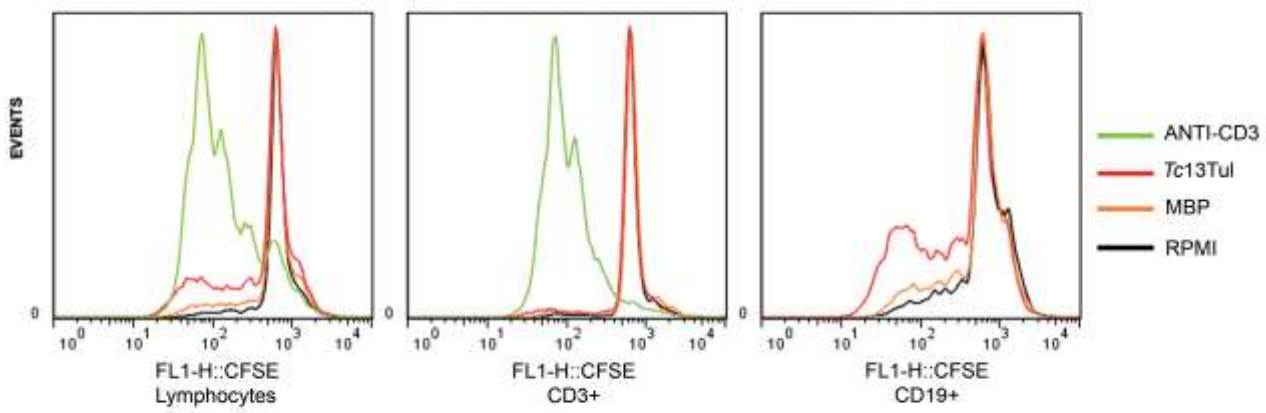
***Tc*13Tul increases the viability of *in vitro* cultured splenocytes from BALB/c mice.**



Splenocytes were cultured with *Tc*13Tul (6 μg/10^6 cells), EPKSA (6 μg/10^6 cells) or equivalent amounts of their respective carrier proteins, MBP (2.2 μg/10^6 cells) and GST (1.5 μg/10^6 cells). Cells cultured in the absence of stimulus (RPMI) and in the presence of PHA (1.25 μg/10^6 cells) were used as controls. Surviving cells after 48 h of incubation were evaluated by propidium iodide (PI) staining and analyzed by flow cytometry. Percentages of viable cells (PI-) were calculated considering the total of 20,000 events acquired as 100%. ***, $p<0.001$ respect to negative controls (RPMI, MBP and GST).

Supplementary Figure 3:

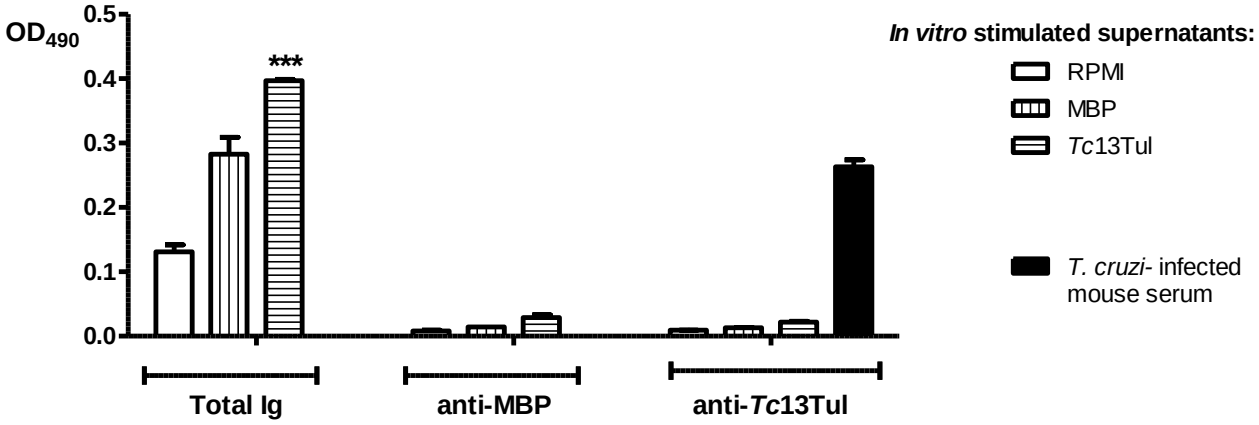
Effect of *Tc*13Tul on lymphocyte proliferation.



Splenocytes were stained with CFSE and cultured for 72 h with *Tc*13Tul (6 µg/10^6 cells), MBP (2.2 µg/10^6 cells) or medium (RPMI). After stimulation, cells were stained with anti-CD19-APC and anti-CD3-PE and analyzed by flow cytometry. Figure shows overlay histograms of CFSE-stained cells. (Dot plots are shown in Figure 2A).

Supplementary Figure 4:

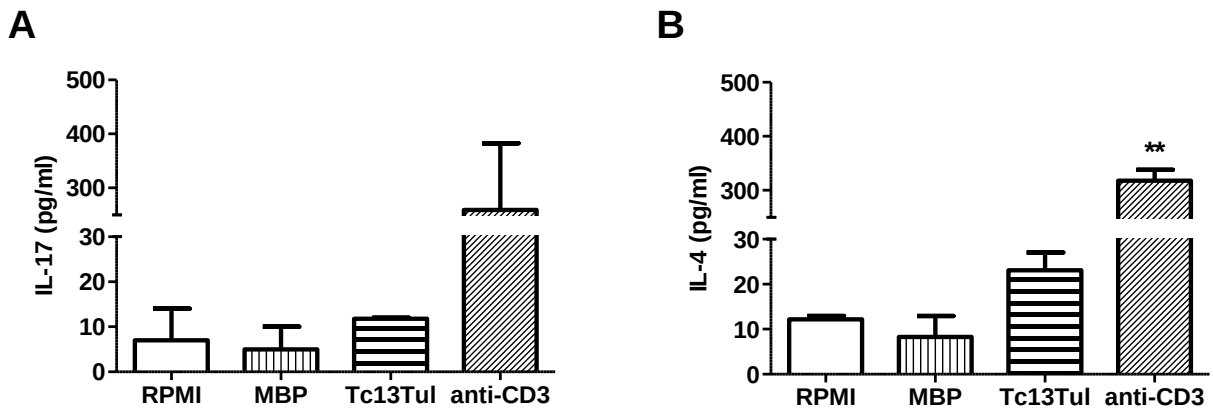
Effect of *Tc*13Tul on non-specific and *Tc*13Tul-specific Ig secretion.



Splenocytes were cultured for 72 h with *Tc*13Tul (6 µg/10^6 cells), MBP (2.2 µg/10^6 cells) or RPMI as control. Total, anti-MBP and anti-*Tc*13Tul Ig levels were detected by ELISA in the supernatants. Figure shows the optical density at 490nm (OD_{490}) measured in the supernatants, diluted 1:32 and 1:2 for total and specific Ig determination, respectively. Data are the means ± SE from two independent experiments. ***, $p<0.001$ respect to MBP and RPMI. Serum from a chronically *T. cruzi*-infected mouse (diluted 1:100) was tested in duplicate as a positive control for anti-*Tc*13Tul Ig.

Supplementary Figure 5:

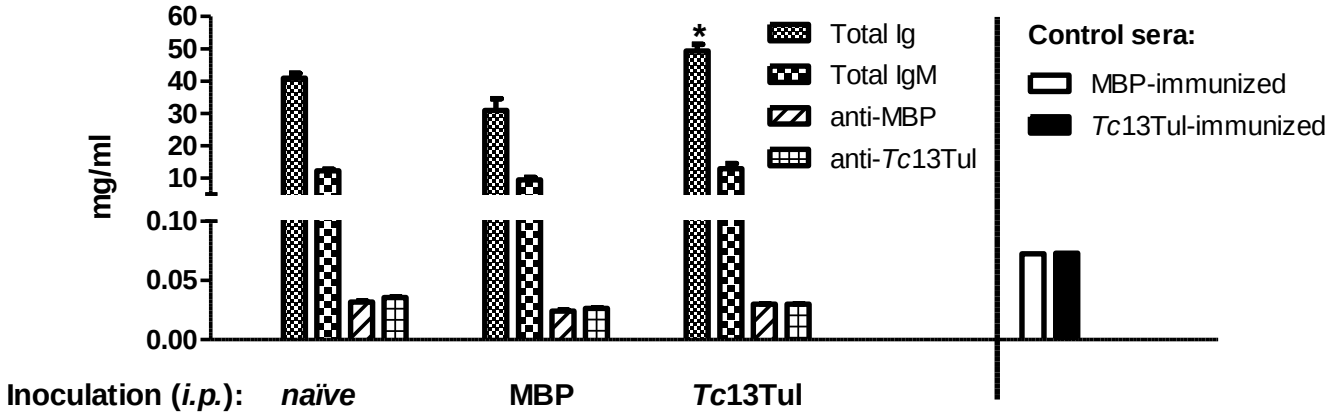
Effect of *Tc*13Tul on IL-17 and IL-4 secretion.



Splenocytes were cultured for 72 h with *Tc*13Tul (6 µg/10^6 cells) or the equivalent amounts of MBP (2.2 µg/10^6 cells). Cells cultured in the absence of stimulus (RPMI) and in the presence of anti-CD3 monoclonal antibody (10 µg/ml) were used as controls. IL-17 (A) and IL-4 (B) secretion were evaluated by ELISA in splenocyte supernatants. **, $p<0.01$ respect to RPMI, MBP and *Tc*13Tul.

Supplementary Figure 6:

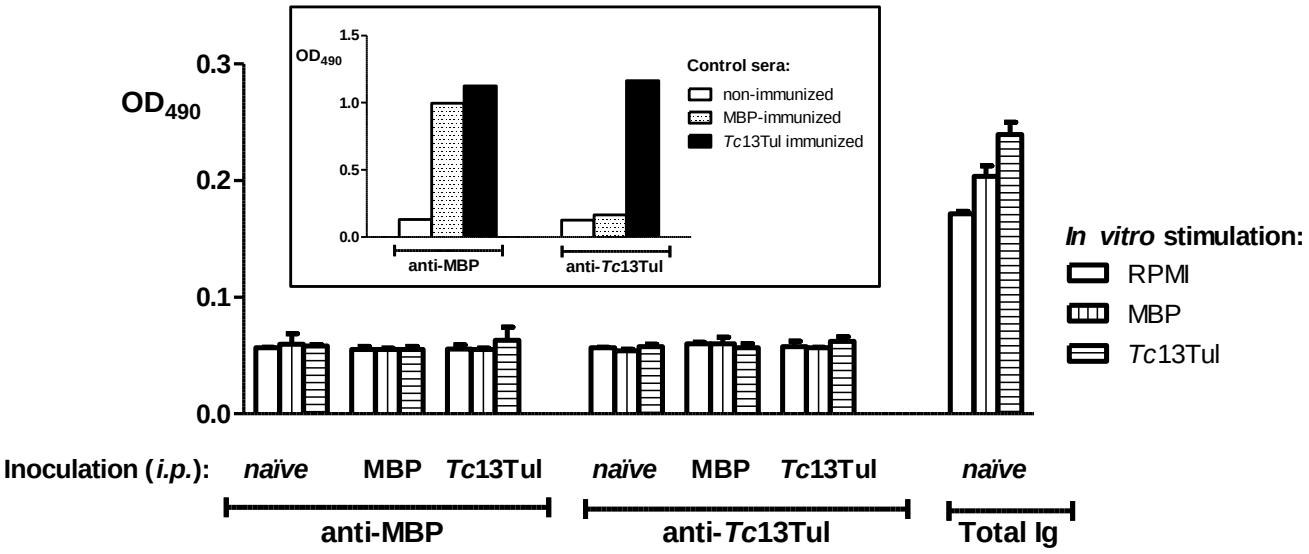
Effect of *Tc*13Tul administered *in vivo* to *naïve* BALB/c mice on non-specific and specific Ig levels in serum.



Levels of non-specific total Ig (Total Ig), non-specific IgM (Total IgM), anti-MBP Ig and anti-*Tc*13Tul Ig evaluated by ELISA in sera collected 8 days post-injection from mice inoculated with buffer (*naïve*), MBP or *Tc*13Tul (a daily *i.p*. dose of 1 μg/mouse for three days). Sera were tested individually (two to three mice per group) and data are the means ± SE. *, $p<0.05$ respect to MBP-inoculated group. Sera from mice immunized with MBP and *Tc*13Tul from a previous research (García *et al*., 2008) (5 weekly doses of 50 μg of recombinant protein/mouse/dose with incomplete Freund's adjuvant) were used as positive controls for anti-MBP and anti-*Tc*13Tul antibodies, respectively.

Supplementary Figure 7:

Effect of *Tc*13Tul on specific Ig secretion in cultured splenocytes from *in vivo Tc*13Tul-inoculated mice.



Total, anti-MBP and anti-*Tc*13Tul Ig levels in supernatants of pooled splenocytes (three mice per group) from *naïve*, MBP- and *Tc*13Tul-inoculated mice cultured in vitro for 72 h without stimulation (RPMI) or stimulated with MBP or *Tc*13Tul. Total and specific Ig were detected by ELISA in supernatants diluted 1:32 and 1:2, respectively. Figure shows the optical density at 490nm (OD490) and data are the means ± SE from pools tested in duplicates. Sera from mice immunized with MBP and *Tc*13Tul from a previous research (García *et al*., 2008) (5 weekly doses of 50 μg of recombinant protein/mouse/dose with incomplete Freund's adjuvant) were tested, diluted 1:100, as positive controls for specific antibodies.