

# Cloning and characterization of a DNA polymerase $\beta$ gene from *Trypanosoma cruzi*

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A gene coding for a DNA polymerase  $\beta$  from the *Trypanosoma cruzi* Miranda clone, belonging to the TcI lineage, was cloned (Miranda Tc $\beta$ ), using the information from eight peptides of the T. *cruzi*  $\beta$ -like DNA polymerase purified previously. The gene encodes for a protein of 403 amino acids which is very similar to the two T. *cruzi* CL Brener (TcIIe lineage) sequences published, but has three different residues in highly conserved segments. At the amino acid level, the identity of TcI- $\beta$  with mitochondrial  $\beta$  and  $\beta$ -PAK from other trypanosomatids was between 68-80% and 22-30%, respectively. Miranda Tc- $\beta$  protein has an N-terminal sequence similar to that described in the mitochondrial *Crithidia fasciculata*  $\beta$ , which suggests that the TcI- $\beta$  plays a role in the organelle. Northern and Western analyses showed that this T. *cruzi* gene is highly expressed both in proliferative and non-proliferative developmental forms. These results suggest that, in addition to replication of kDNA i