

# Nucleotide sequence of a cDNA encoding a *Trypanosoma cruzi* acidic ribosomal PO protein: a novel C-terminal domain in *T.cruzi* ribosomal P proteins

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*Trypanosoma cruzi* ribosomal proteins are antigenic in chronic human *T.cruzi* infections (1). Immunoscreening of a  $\lambda$ gt11 bloodstream trypomastigote cDNA library (2) allowed the isolation of a recombinant, Try-PO, containing a 979 bp long polyadenylated cDNA that encoded the partial sequence of a *T.cruzi* ribosomal PO protein.

Two oligonucleotides were synthesized corresponding to nucleotides 1–20 of the *T.cruzi* miniexon (sense strand), and 62–84 (non coding strand) of the Try-PO cDNA. They were used to amplify the 5' end of the ribosomal PO protein mRNA by RNA-PCR. The amplified 227 bp cDNA (5'PO) was sequenced.

Together, the 5'PO and Try-PO cDNAs span the complete ribosomal PO mRNA sequence. It encodes for a 321 amino acid long peptide, with a molecular weight of about 34,500, and an estimated pI of 5,66. It is 4 residues longer than the corresponding *Drosophila* and human counterparts (3, 4), and 9 residues longer than the *Saccharomyces cerevisiae* L10 protein (5).

Its acidic carboxy tail differs from the characteristic C-terminal domain of the low molecular weight *T.cruzi* acidic ribosomal P proteins (see accompanying papers), and clearly resembles that of archaeobacterial L10 proteins (Figure 1) (6, 7). In addition, the *T.cruzi* protein harbors the 28S rRNA binding domain (Figure 2).

The present results, together with those reporting the sequences of the low molecular weight *T.cruzi* acidic ribosomal TcPJL5 (8), TcP2b and TcP1 proteins (see accompanying communications) indicate that *T.cruzi* is the only eukaryotic organism known to express ribosomal P proteins with radically different C-terminal sequences (Figure 3).

## ACKNOWLEDGEMENTS

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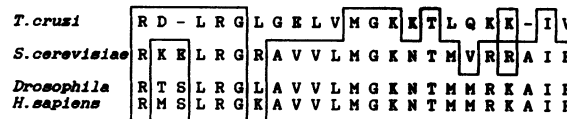


Figure 1. Potential 28S rRNA interaction region. Identical residues are boxed.

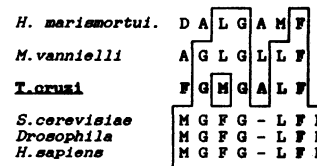


Figure 2. Ribosomal PO protein C-terminal regions. Identical residues are boxed.

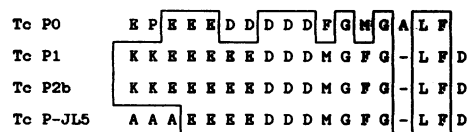


Figure 3. *T.cruzi* ribosomal P protein C-terminal regions. Identical residues are boxed.