

DISTINCT PHOSPHATASE ACTIVITIES IN TWO STRAINS OF
TRYPANOSOMA CRUZI

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Trypanosoma cruzi, the etiological agent of Chagas`disease displays a high degree of intraspecific heterogeneity. In this work, phosphatases activities were evaluated in Tulahuen 2 and Y strains, using pNPP as a substrate, in the presence of potential inhibitors and Mg^{2+} . At pH 4.0 and 7.0, in the presence or absence of Mg^{2+} (10mM), potassium phosphate (5mM) had no effect. Zinc sulphate (1mM) had no effect at pH 4.0. At pH 7.0, in the absence of Mg^{2+} , inhibited by 50% (Y) and 33% (Tulahuen 2) the phosphatase activity, but in its presence inhibited 75% on both strains. At pH 4.0 pervanadate (0.1 and 1 mM), promoted a higher inhibition in Tulahuen 2 cells, but at pH 7.0 the same level of inhibition was observed for both strains. Tartrate (10 mM) had no significant effect. NaF (10mM) at pH 7.0 inhibited 80% in the absence and 97% in the presence of Mg^{2+} on both strains. pHMB at pH 7.0 in the absence of Mg^{2+} inhibited 64% in Tulahuen 2 and 38% in Y cells. In the presence of Mg^{2+} had no significant effect on the Y, but inhibited 71% in Tulahuen 2 cells. EDTA (1mM) inhibited only the Y strain at pH 7.0 in the absence of Mg^{2+} (40%). O-vanadate (1mM) in the absence of Mg^{2+} inhibited 74% and 86% in Tulahuen 2 and Y strain, respectively. In the presence of Mg^{2+} , this inhibitor had the same effect (89%). The differential phosphatase activity profile towards inhibitors suggests the presence of distinct phosphatases.

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