

Supplementary Material

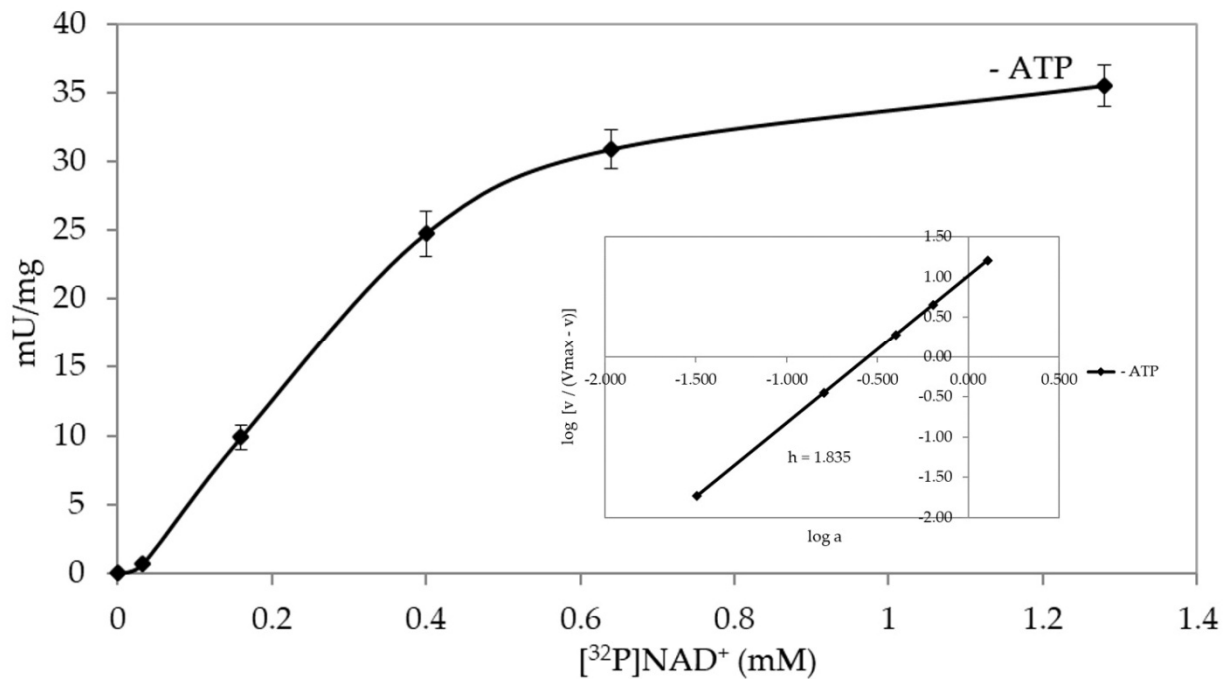


Figure S1. PARPSso Activity. The sigmoid curve was determined by measuring purified PARPSso activity at increasing concentrations of $[^{32}\text{P}]\text{NAD}^+$ (10,000 cpm/nmol). The reported values are means of 4 different assays with two enzyme preparations. The inset shows the linearization of the curve by Hill equation:

$$\log [v/(V-1)] = h \log a - h \log K_{0.5}$$

Where $V = V_{\text{max}}$; a = substrate concentration; $K_{0.5}$ = substrate concentration at half of V_{max} ; $h = n_{\text{H}}$ = Hill coefficient measured by the slope of the plot. $n_{\text{H}} = 1.8$.

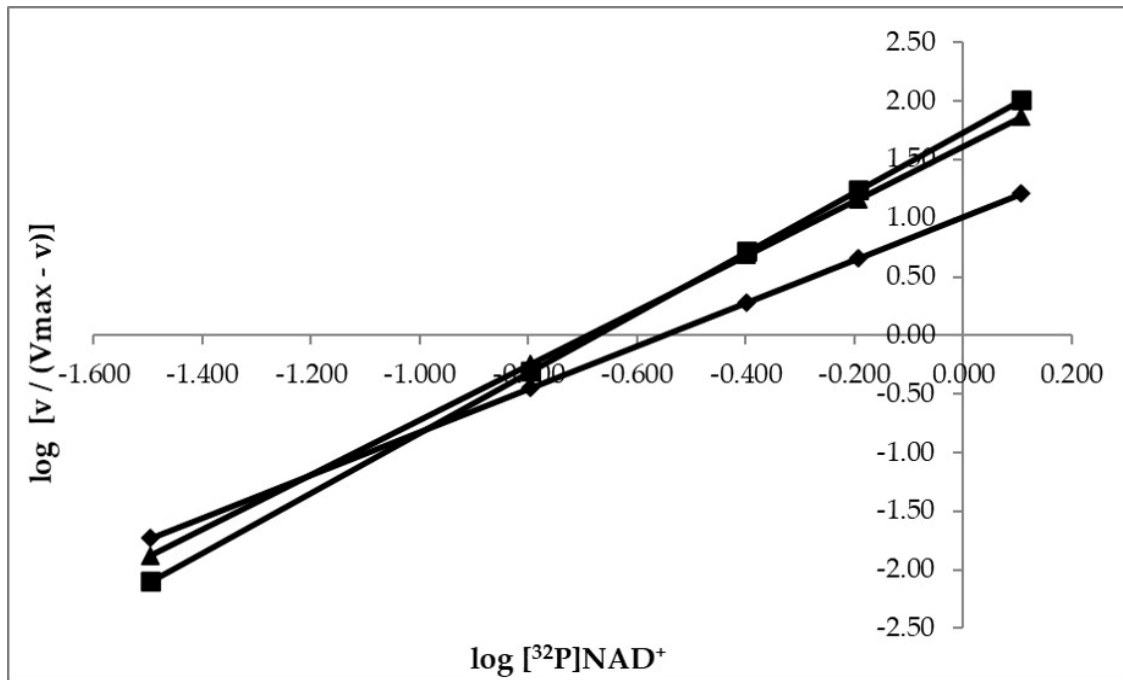


Figure S2. Linearized plots of ADPribosylating activity in presence of different ATP concentrations (μM : 0, \blacklozenge ; 5, \blacksquare ; 10, \blacktriangle). At 0.4mM $[\text{}^{32}\text{P}]\text{NAD}^+$ K_i was $-7.9 \cdot 10^{-3}$ (at $5 \mu\text{M}$ ATP), and -1.710^{-2} (at $10 \mu\text{M}$ ATP).

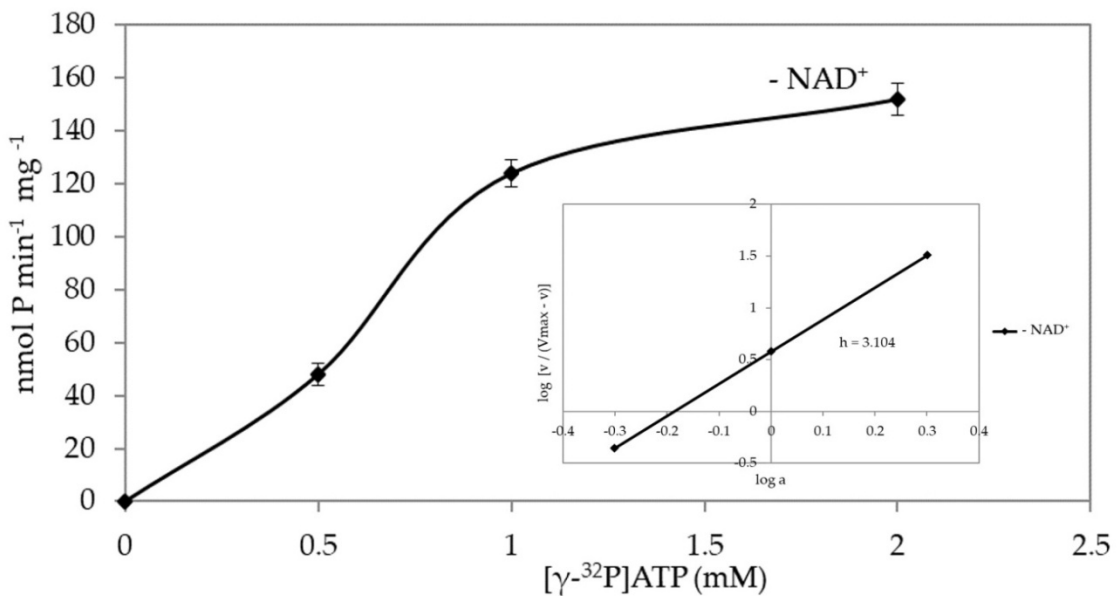


Figure S3. ATPase Activity of PARPSso. The sigmoid curve was determined by measuring purified PARPSso activity at increasing concentrations of $[\gamma\text{-}^{32}\text{P}]\text{ATP}$ ($10,000 \text{ cpm/nmole}$). The reported values are means of 4 different assays with two enzyme preparations. The inset shows the linearization of the curve by Hill equation as described in the legend of Figure S1. $n_H=3.1$.

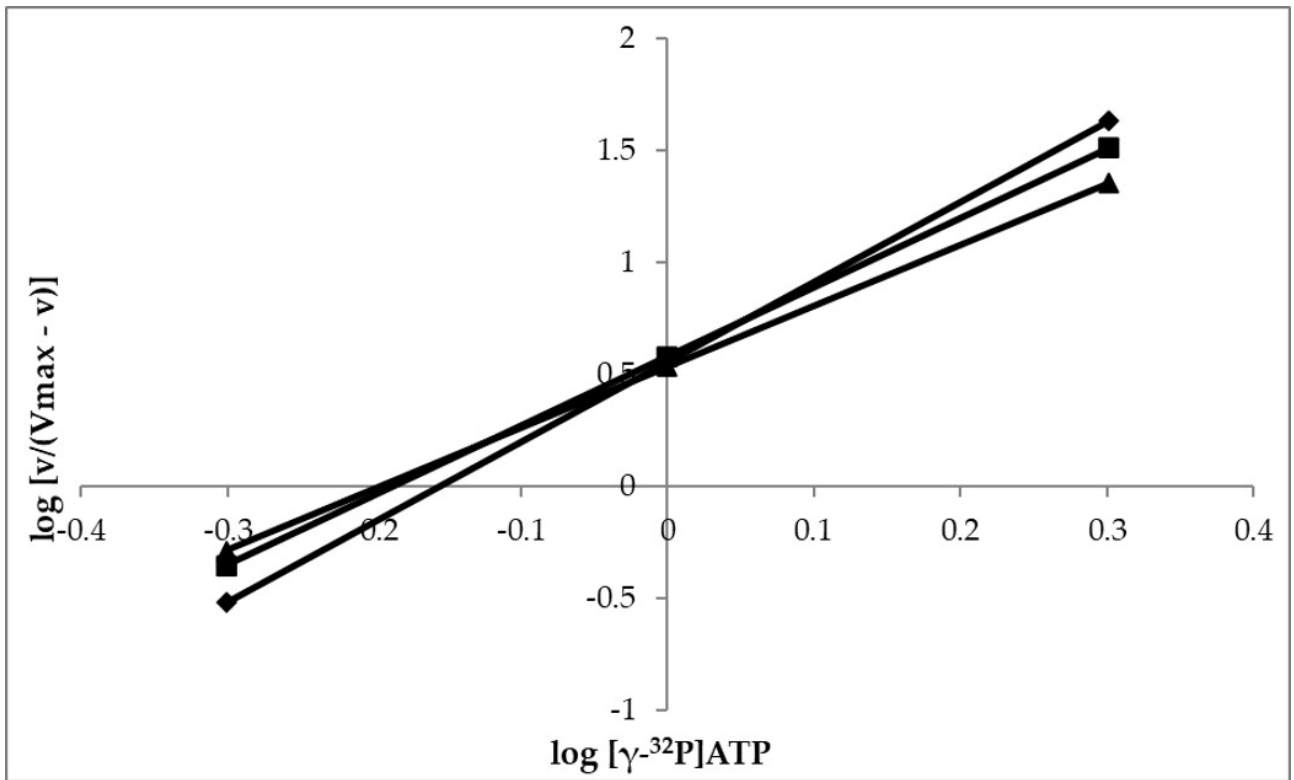


Figure S4. Linearized plots of ATPase activity in the presence of different NAD⁺ concentrations (μM: 0, ■; 10, ◆; 100, ▲). At 0.5mM [³²P]ATP K_i was 7.3·10⁻³ (at 10 μM NAD⁺), and 1.910⁻¹ (at 100 μM NAD⁺).

K_i was calculated by the following equation:

$$1/v = [K_m / (V_{max} K_i [S])] [I] + 1/V_{max} [1 + (K_m / [S])]$$