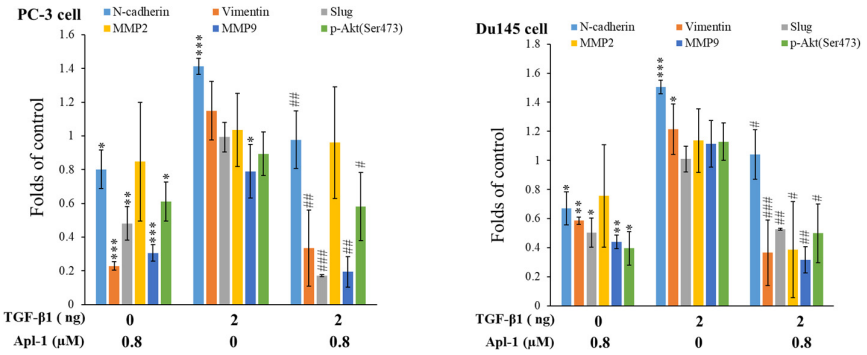
Supplementary Data

1. Supplementary Figures and Tables

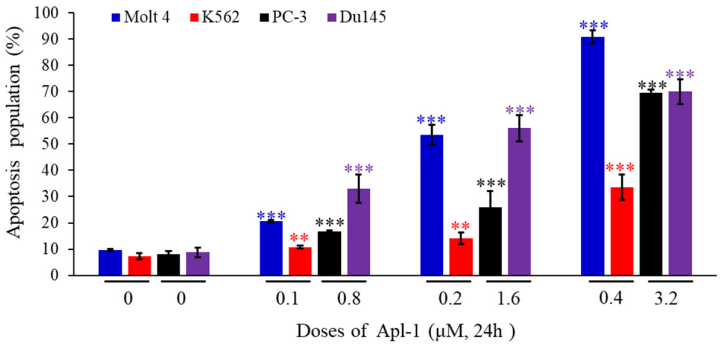
1.1. Effect of Apl-1 on the migration and EMT activation-induced with TGF-β1 in human prostate cancer.



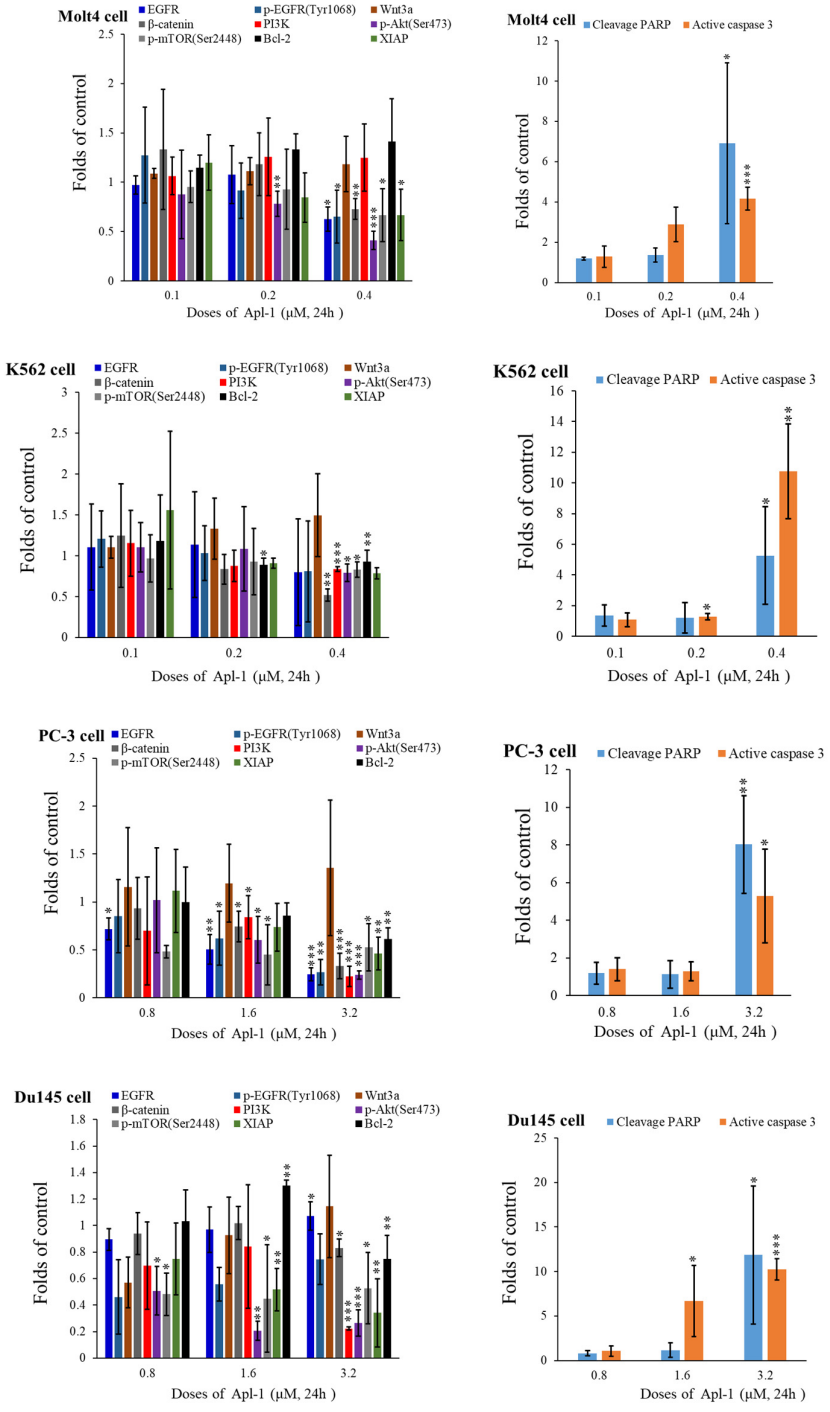
Supplementary Figure S1. Quantitative western blot analysis to determine protein expression of EMT-related biomarkers. The results are presented as the mean ± SD of three independent experiments. (*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$, *control vs Apl-1 group*). Compared with the group containing TGF-β1(#$p < 0.05$; ##$p < 0.01$; ###$p < 0.001$, TGF-β1 and Apl-1 co-treatment group).

1.2. Apoptotic effect of Apl-1 on leukemia and prostate cancer cells

(a)



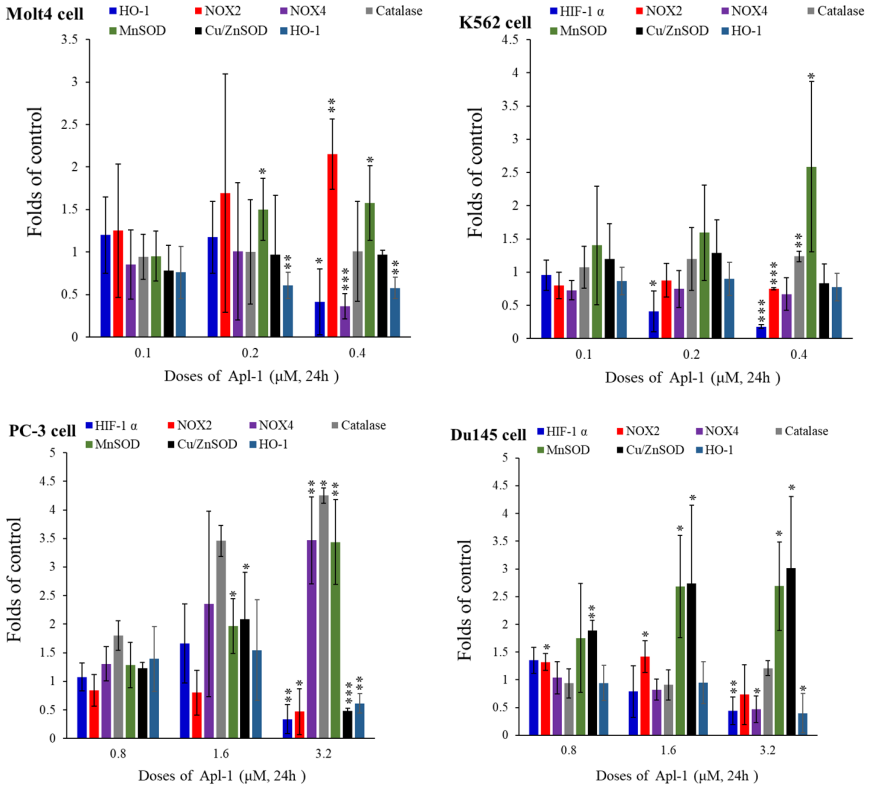
(b)



Supplementary Figure S2. The apoptotic effect of Apl-1 on leukemia and prostate cancer cells is mediated through mitochondrial dysfunction and PI3K/AKT pathway. (a)Quantify the percentage of apoptosis marked by Annexin V/PI staining. (b) Quantification of densitometric values of apoptosis-related proteins and PI3K/AKT pathway proteins. (*$p < 0.05$;

***p < 0.01; ***p < 0.001, control vs Apl-1 group*).

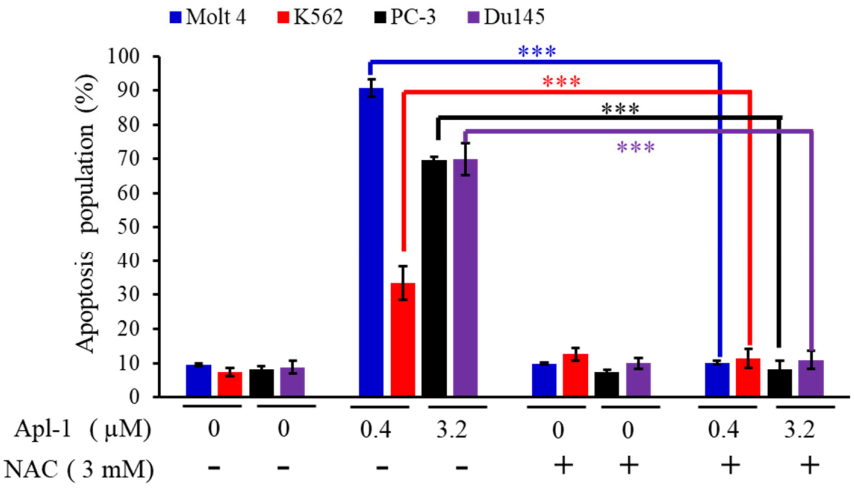
1.3. Apl-1 induced NOX-mediated ROS in prostate and leukemia cancer cells



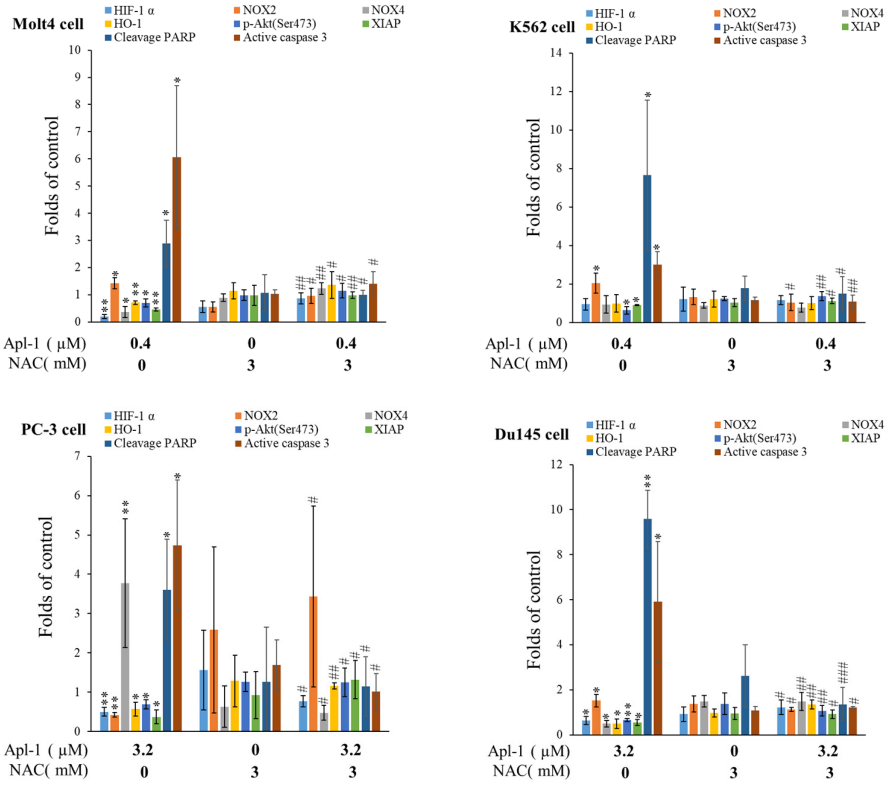
Supplementary Figure S3. Apl-1 promoted the production of ROS by cancer cells in leukemia and prostate cancer cells. Densitometric values to quantify protein changes associated with intracellular oxidative regulation. (**p < 0.05; **p < 0.01; ***p < 0.001, control vs Apl-1 group*).

1.4. The induced apoptosis of Apl-1 is mediated by excess NOX/ROS production.

(a)



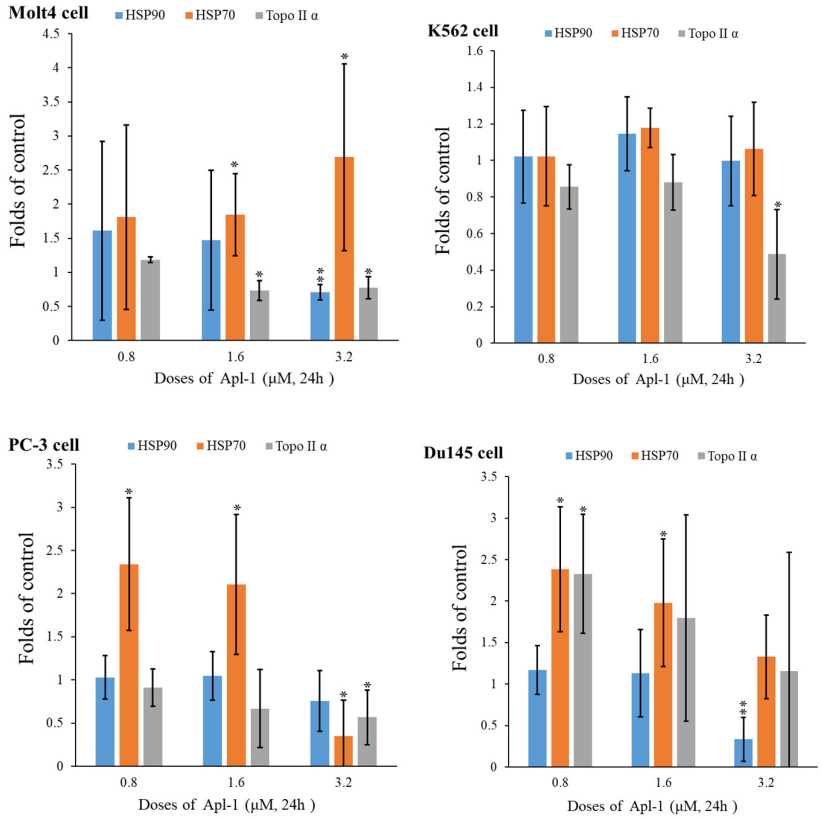
(b)



Supplementary Figure S4. Apl-1 induced apoptosis via Nox/ROS. (a) To quantify the percentage of apoptotic populations that were pretreated with NAC for 30 min and then treated with different doses of Apl-1 for 24 h.(b) Quantitative Western blot was used to detect the NOX/ROS-mediated apoptosis-related proteins regulated by NAC pretreatment on Apl-1. (*p <

*0.05; **p < 0.01; ***p < 0.001, control vs Apl-1 group*). Compared with the group containing NAC (*#p < 0.05; ##p < 0.01; ###p < 0.001*, NAC and Apl-1 co-treatment group).

1.5. Interaction of Apl-1 with Topo II and Hsp90 proteins



Supplementary Figure S5. The effect of Apl-1 on the binding ability of Hsp90 and topo II*α* protein. Quantification of expression of Hsp90 and topo II*α*-related proteins was analyzed by western blotting.