

Protective effect of polaprezinc on cadmium-induced injury of lung epithelium.

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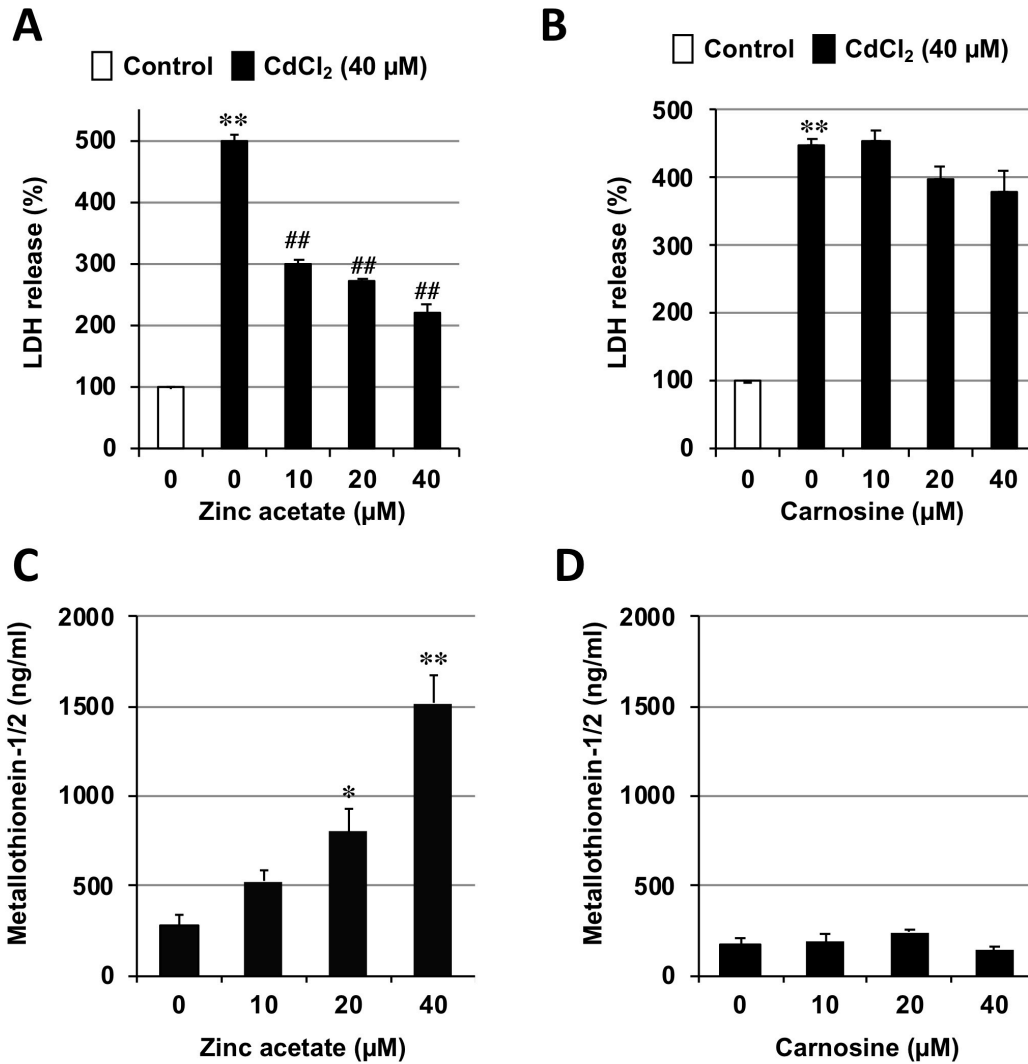
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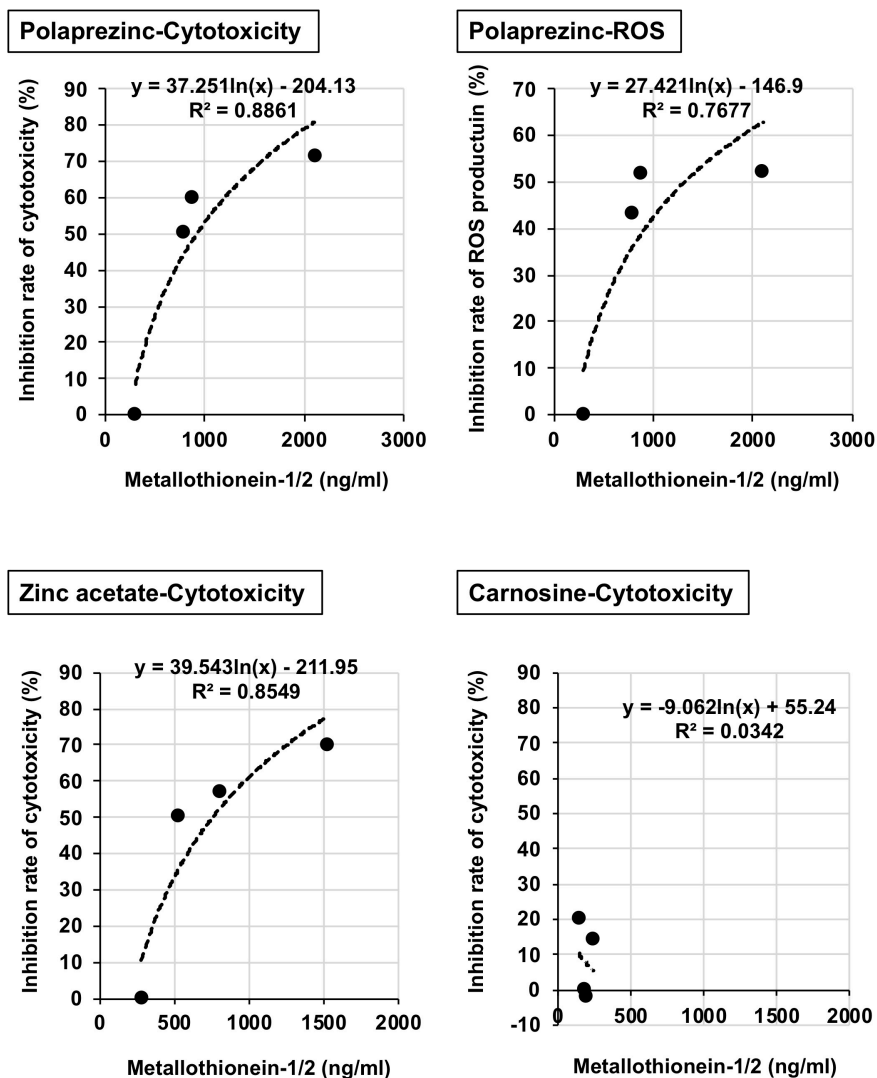
Supplementary Figure S1



Supplementary Figure S1.

A549 cells were pre-incubated with the indicated concentrations of zinc acetate (A) or carnosine (B) for 24 h and then with the indicated concentrations of zinc acetate or carnosine in the absence (control) or presence of CdCl₂ (40 μM) for 24 h. LDH release into the culture medium was determined using an LDH activity assay kit (A, B). A549 cells were incubated with the indicated concentrations of zinc acetate (C) or carnosine (D) for 24 h and the levels of metallothionein-1, 2 in whole cell extracts were then determined using an ELISA kit (C, D). Values represent the mean \pm S.E. # $P < 0.05$; ** or ## $P < 0.01$ (* vs Control, # vs CdCl₂ alone).

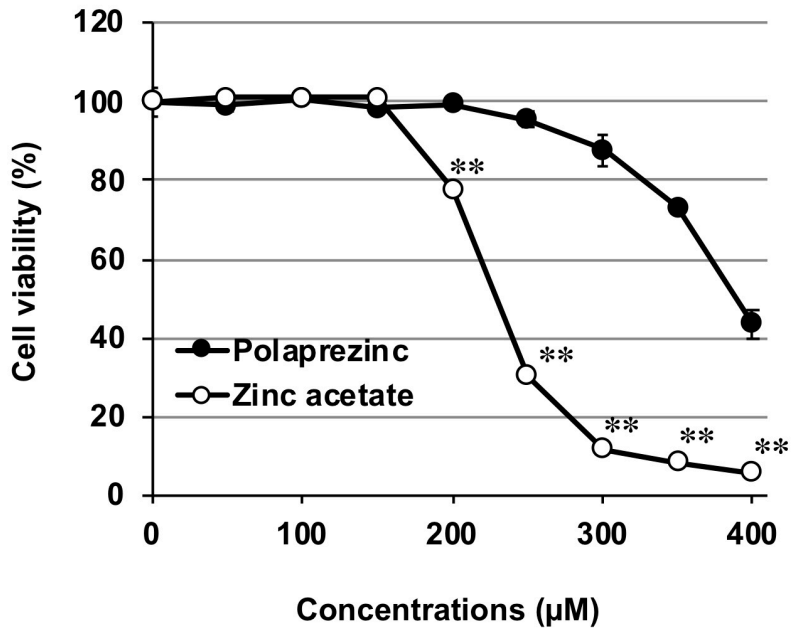
Supplementary Figure S2



Supplementary Figure S2.

Correlations between the inhibition of cytotoxicity or ROS production and MT induction by polaprezinc, zinc acetate, or carnosine based on the data in Figures 2D, 4B, 6A, and Supplementary Figure 1. The inhibition of cytotoxicity and ROS production was calculated assuming that treatment with CdCl_2 produced 0% inhibition and the control was 100%. Because the coefficient of determination (R^2) was 0.8 or more, there was a strong correlation between inhibition of cytotoxicity or ROS production and MT induction by polaprezinc or zinc acetate. In contrast, no correlation was found between inhibition of cytotoxicity and MT induction by carnosine. These results indicate that MT induction by zinc contained in polaprezinc is important to suppress CdCl_2 -induced cytotoxicity.

Supplementary Figure S3



Supplementary Figure S3.

A549 cells were incubated with the indicated concentrations of polaprezinc or zinc acetate for 24 h. Viable cell number was determined using CellTiter-Glo[®] 2.0. Values represent the mean \pm S.E. **P<0.01 (* polaprezinc vs zinc acetate).