

Supporting Information for:

Reduction of ormaplatin and *cis*-diamminetetrachloroplatinum(IV) by ascorbic acid and dominant thiols in human plasma: kinetic and mechanistic analyses

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The supporting information contains 5 supporting figures (**Figures S1–S5**).

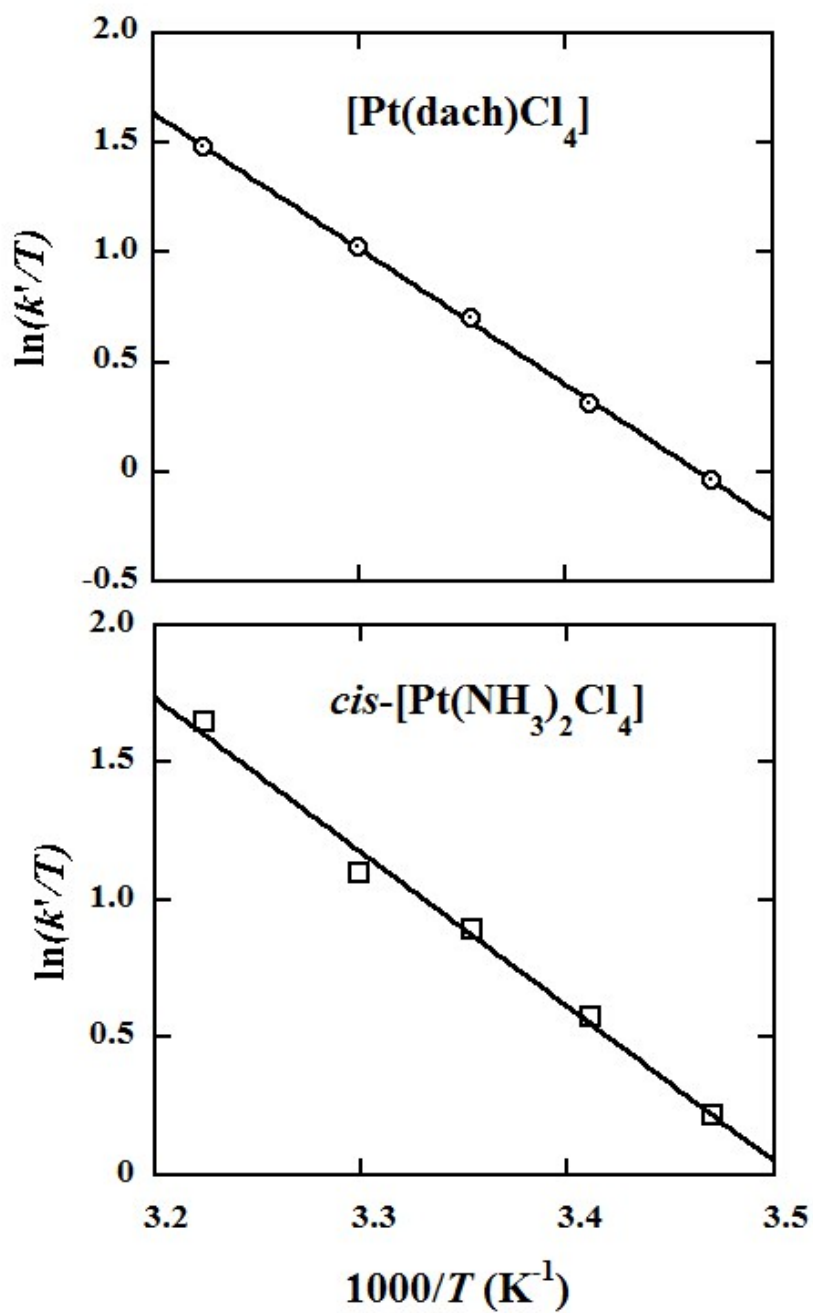


Figure S1. Eyring plots for the observed second-order rate constants k' at pH 7.40 for the reductions of $[\text{Pt(dach)Cl}_4]$ and $\text{cis-}[\text{Pt(NH}_3)_2\text{Cl}_4]$ by Asc.

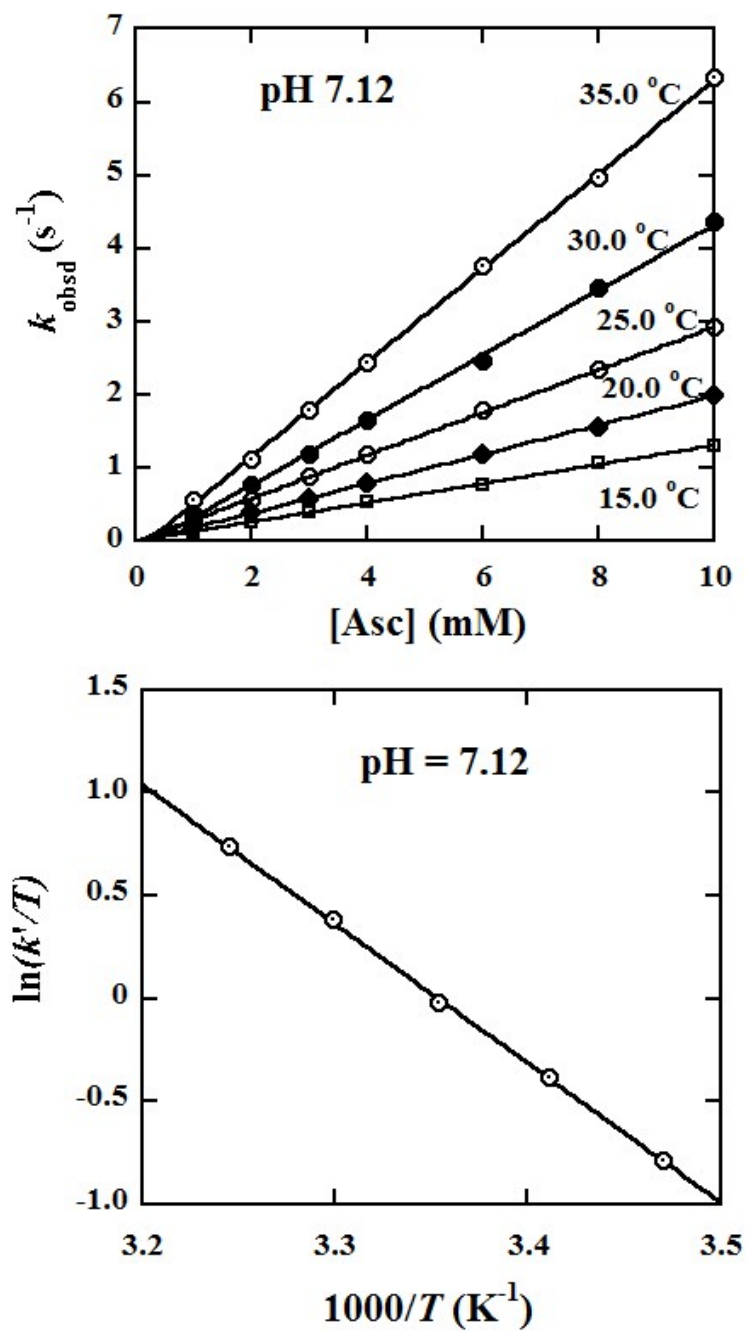


Figure S2. (Top): Observed first-order rate constants k_{obsd} as a function of [Asc] at different temperatures, pH 7.12 and $\mu = 1.0$ M for reduction of [Pt(dach)Cl₄] by Asc. (Bottom): Eyring plot of k' at pH 7.12.

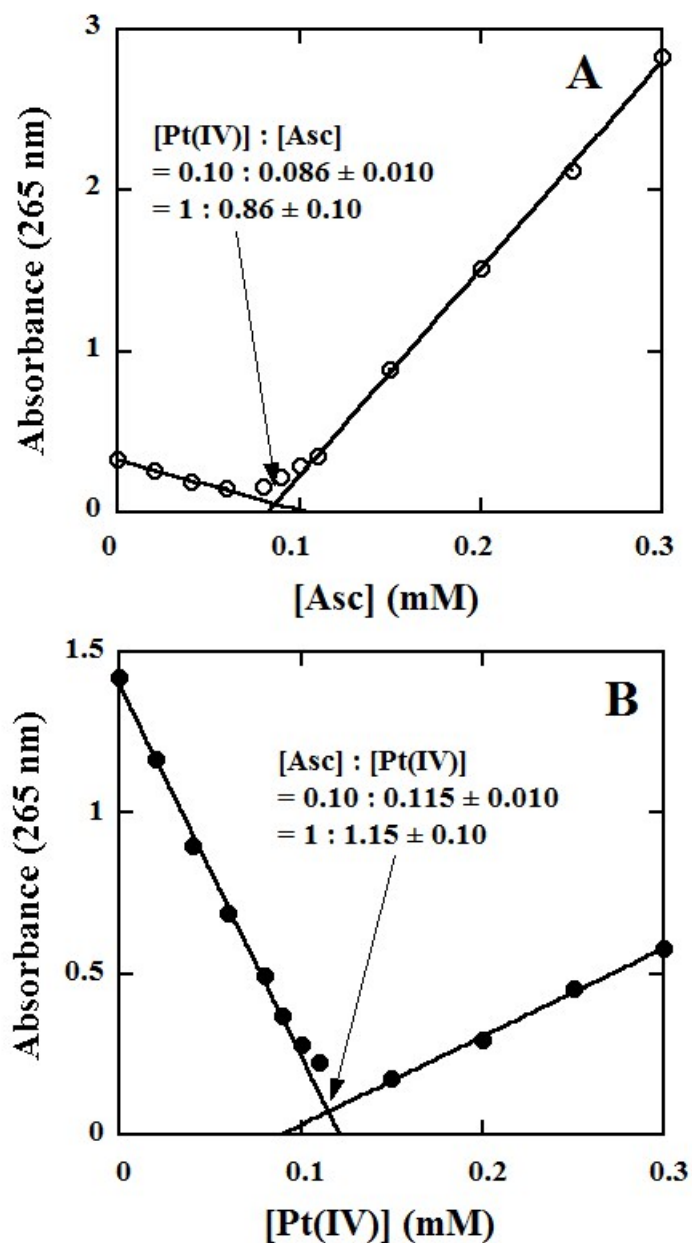
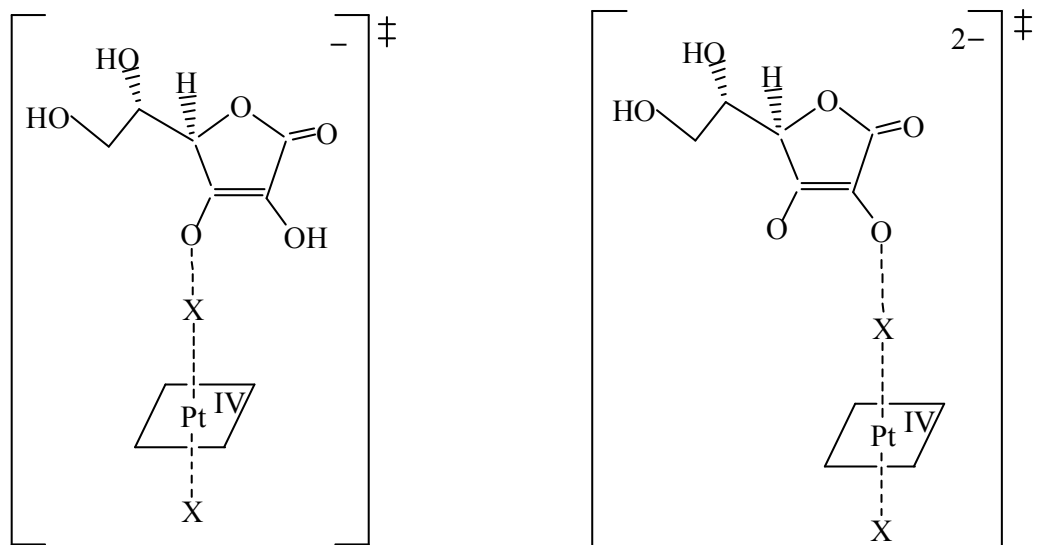


Figure S3. Absorbances at 265 nm for a series of reaction mixtures of *cis*-[Pt(NH₃)₂Cl₄] with Asc after reaction of 4 – 5 min. **(A)**: The concentrations of Asc were varied in the region $0 \leq [\text{Asc}] \leq 0.30$ mM and [Pt(IV)] = 0.10 mM was kept constant. **(B)**: The concentrations of *cis*-[Pt(NH₃)₂Cl₄] were varied in the region $0 \leq [\text{Pt(IV)}] \leq 0.30$ mM and [Asc] = 0.10 mM was kept constant. Reaction medium: pH 7.40 phosphate buffer of $\mu = 1.0$ M; room temperature.



X = Cl and Br

Figure S4. Proposed transition states.

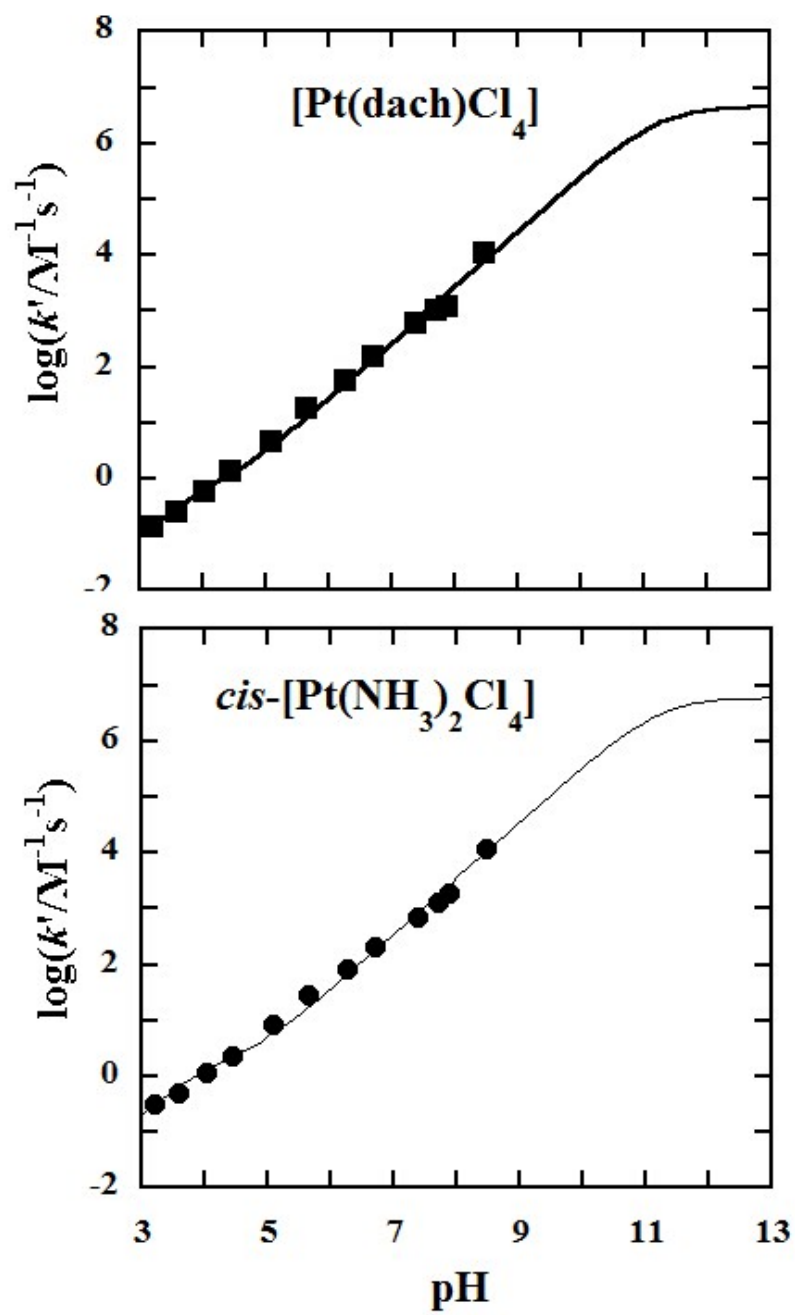


Figure S5. The same plots as those in the Figure 6 but the pH are extrapolated to 13.