Supplementary Material

Enhanced anti-cancer efficacy to cancer cells by a novel monofunctional mononuclear platinum(II) complex containing a mixed $S,N,S$-donor ligand

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Fig. S1  ESI-MS of $N$-(4-(benzo[d]oxazol-2-yl)phenyl)-2-(bis(2-ethylthioethyl)amino)acetamide (L) in methanol.

Fig. S2  $^1$H NMR of $N$-(4-(benzo[d]oxazol-2-yl)phenyl)-2-(bis(2-ethylthioethyl)amino)acetamide (L) in DMSO-$d^6$. 

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**Fig. S3** $^{13}$C NMR of $N$-(4-(benzo[d]oxazol-2-yl)phenyl)-2-(bis(2-ethylthioethyl)amino)acetamide (L) in DMSO-$d^6$.

**Fig. S4** $^1$H NMR of complex 1 ([PtLCl]Cl) in DMSO-$d^6$. 
**Fig. S5** $^{13}$C NMR of complex 1 ([PtLCl]Cl) in DMSO-$d_6$.

**Fig. S6** ESI-MS of complex 1 ([PtLCl]Cl) in methanol.

**Fig. S7** $^1$H NMR of complex 2 ([PtL/Cl]Cl) in CDCl$_3$. 
Fig. S8 $^{13}$C NMR of complex 2 ([PtL'Cl]Cl) in CDCl₃.

Fig. S9 ESI-MS of complex 2 ([PtL'Cl]Cl) in methanol.
Fig. S10 $^1$H NMR spectra of 5'-GMP, complex 1, and the reaction of complex 1 with equimolar 5'-GMP for 24 h in DMSO-$d_6$ at room temperature.

Fig. S11 Time-dependent absorption spectra of complex 1 (16 µM) in the presence GSH (8 mM) (incubated time: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 120, 150, 180, 210, 240 min, respectively) at 37 °C in Tris-HCl/NaCl buffer (pH 7.40). The inset shows the plot of the linear fit of lnA vs. time (A is the absorbance of 260 nm).
Fig. S12 ESI-MS spectra (positive mode) of the competitive reaction of complex 1 with GSH and 5'-GMP (1:1:1) recorded in methanol/water/water (v/v/v, 1:1:1) at 37 °C for the different incubated time. Assignments: 674, [PtLCl]+ (C_{23}H_{29}N_{5}O_{2}S_{2}ClPt, calcd 674.17); 945, [PtL(GS)]+ (C_{33}H_{45}N_{6}O_{8}S_{3}Pt, calcd 945.03); 1056, [PtL(GMP) – Na + CH_{3}OH]+ (C_{34}H_{45}N_{8}O_{11}S_{2}PNaPt, calcd 1054.95).