

Supporting information

for

Selenadiazole Derivatives as Theranostic Agents for Simultaneous Cancer Chemo-/Radiotherapy by Targeting Thioredoxin Reductase

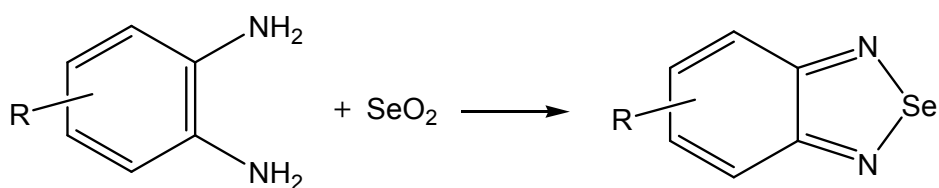
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Methods

Examination the distribution of SeD-3 in HeLa cells.

HeLa cells were incubated with SeD-3 at 15 μ M for 4 h and 12 h, respectively. Then we separated the nucleus of these treated HeLa cells by nuclei isolation kit: nuclei PURE prep assay kit (NUC201). These collected fractions of nucleus and cytoplasm were then conducted with fluorescence determination.

Results



1. R= H; 2. R= CH_3 ; 3. R= NO_2 ;

Scheme S1. Chemical structure of the synthetic selenadiazole derivatives (**1-3**).

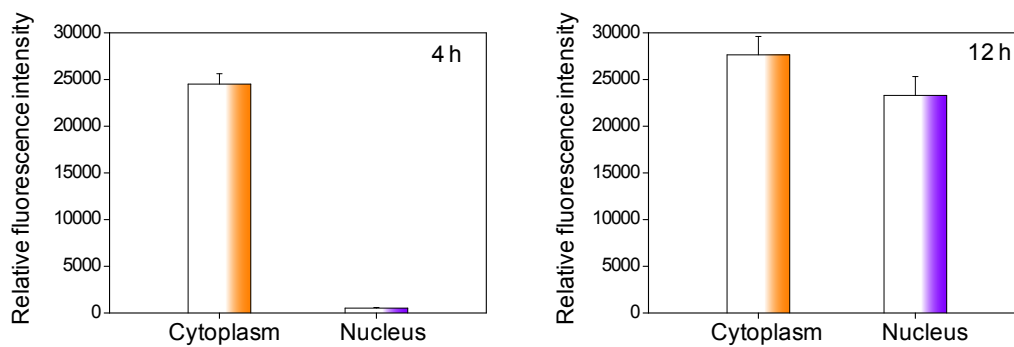


Figure S1. Relative fluorescence intensity of SeD-3 in the cytoplasm and nucleus of HeLa cells after 4-h or 12-h incubation.

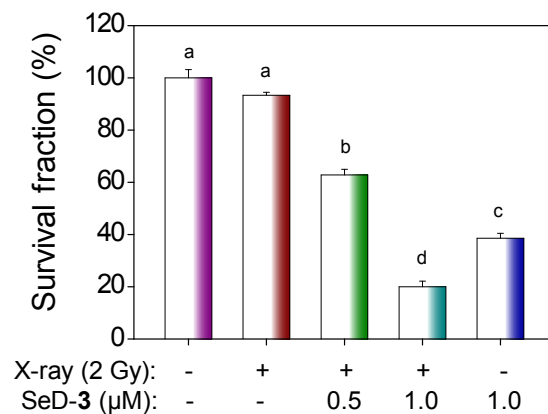


Figure S2. SeD-3 enhances the inhibitory effects of X-ray on the colony survival

fraction of HeLa cells. The cells were pre-treated with SeD-3 for 4 h, and then

exposed to 2 Gy X-ray, and incubated for another 24 h.

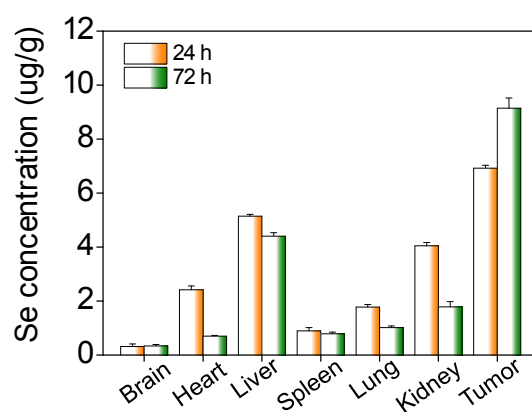


Figure S3. Biodistribution of Se in the main organs after 24-h and 72-h intravenous

injection to the HeLa xenografts nude mice.

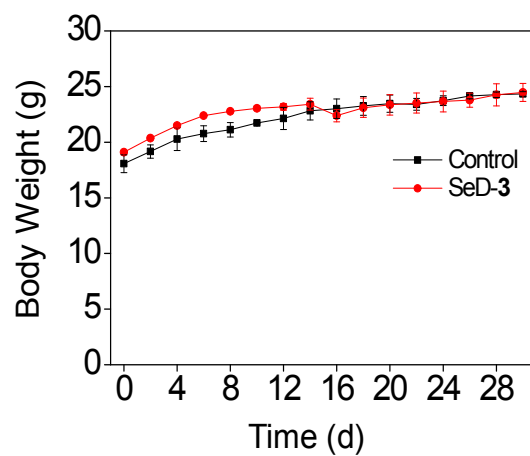


Figure S4. Changes of body weight after treated with SeD-3 at 2 mg/kg for 30 days.

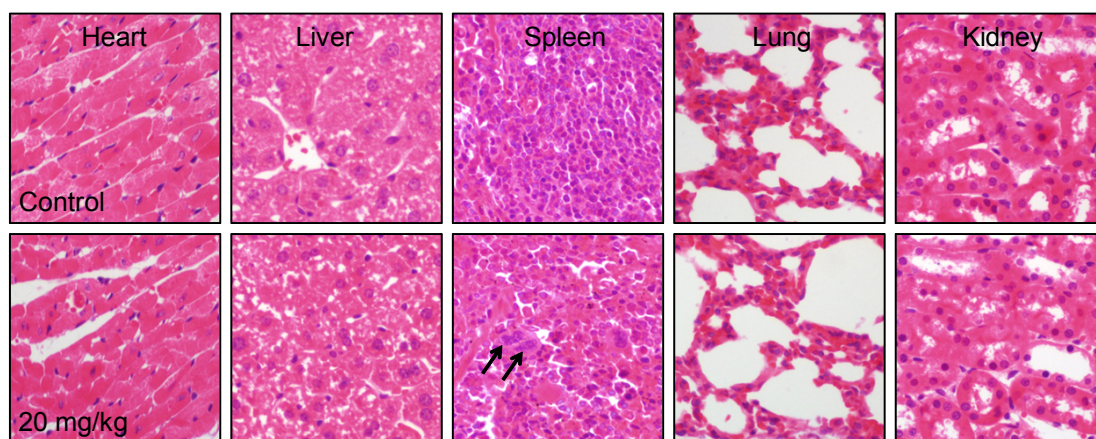


Figure S5. Histological analysis of the effects of SeD-3 on main organs of mice.

H&E staining of heart, liver, spleen, lung and kidney that treated by SeD-3 for 30 days at the high dose of 20 mg/kg (the concentration of selenium, n=8).