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Supporting information

Novel Glutathione-linked Nitrones as Dual Free Radical Probes

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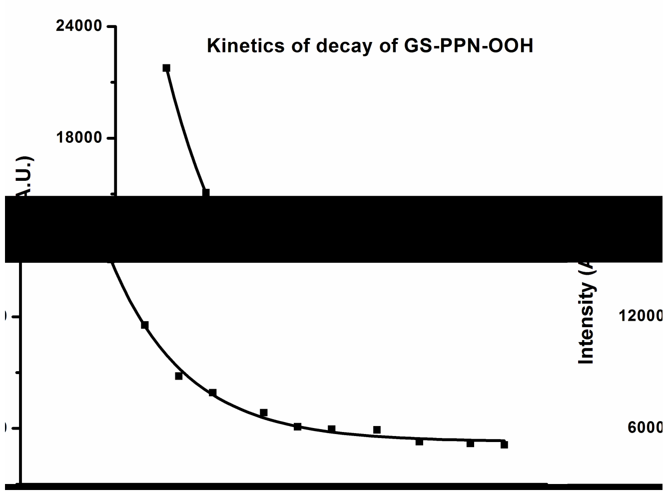

Figure S1. Decay plot of the superoxide spin adduct of GS-PPN. The superoxide spin adduct was generated by adding xanthine oxidase (0.02 U/mL) to an aqueous solution containing hypoxanthine (0.4 mM), DTPA (1 mM) and GS-PPN (50 mM) in PBS (20 mM, pH 7.4). The decay of the adduct was examined 2 min after addition of superoxide dismutase (400 units per mL).

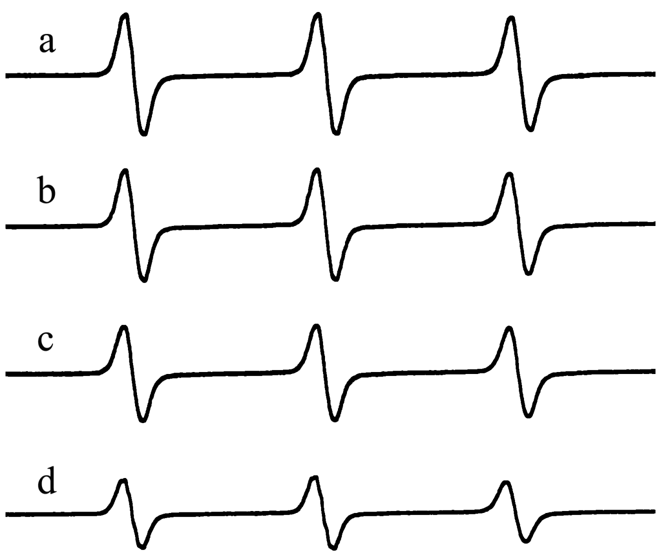

Figure S2. EPR spectra of 4-hydroxy-2,2,6,6-tetramethylpiperidine-1-oxyl (Tempol, 0.5 mM) in the aqueous solutions containing various concentrations of glycerol; a) in the absence of glycerol; b) glycerol (volume percentage, 10%); c) glycerol (30%); d) glycerol (50%).

Table S1. EPR hyperfine splitting constants of GS-PPN spin adducts

Adduct	Source	α_P (mT)	α_N (mT)	α_H (mT)
$O_2^{\bullet -}$	HX/XOD[a]	4.21	1.35	0.21
	PSII[b]/hν	4.23	1.36	0.22
$CH_3O^{\bullet}$	$CH_3OH/Pb(OAc)_4$	3.92	1.32	0.26
$EtO^{\bullet}$	$C_2H_5OH/Pb(OAc)_4$	3.94	1.34	0.25
$CH_2^{\bullet}OH$	CH_3OH/Fenton[c]	4.25	1.48	0.34
$CH_3CH^{\bullet}OH$	C_2H_5OH/ Fenton[c]	4.20	1.48	0.33
$(CH_3)_2C^{\bullet}OH$	iPrOH/ Fenton[c]	3.94	1.46	0.34
$C_3H_7CH^{\bullet}OH$	nC_4H_9OH/Fenton[c]	4.23	1.43	0.34
$CO_2^{\bullet -}$	HCO_2Na/ Fenton[c]	5.04	1.47	0.45
$ClPh^{\bullet}$	p-CDT[d]/hν, water	4.54	1.48	0.39
	p-CDT[d]/hν, DMSO	4.24	1.40	0.31
$^{\bullet}SO_3^{2-}$	Na_2SO_3/ $K_2Cr_2O_7$	4.45	1.37	0.1

a, HX/XOD, hypoxanthine/xanthine oxidase; b, PSII, photosystem II; c, Fenton consists of H_2O_2, EDTA and Fe^{2+}; d, p-CDT, para-chlorophenyl diazonium tetrafluoraborate.