

Supporting information

Activation of Nrf2 by Lead Sulfide Nanoparticles Induce Impairment of Learning and Memory

Yanhua Cao^{†‡}, Dong Wang^{*}, Qingzhao Li[‡], Huajie Liu, [□] Cuihong Jin[†], Jinghua Yang[†], Shengwen Wu[†], Xiaobo Lu[†], Yuan Cai^{†*}

[†]Department of Toxicology, School of Public Health, China Medical University, Shenyang 110001, China

[‡]Department of Toxicology, School of Public Health, Hebei United University, Tangshan 063000, China

^{||}Department of Occupational and Environmental Health, School of Public Health, China Medical University, Shenyang 110001, China

^{*} Department of Nutrition, Beidaihe Sanatorium of Beijing Military Region, Qinhuangdao 066000, China

[□]Shanghai Institute of Applied Physics, Chinese Academy of Sciences, Shanghai 201800, China

*Corresponding author. E-mail: flower_cyh@163.com. Fax: +86-315-3725312

Table S1 Brain coefficient values (mean±SD, n=10)

groups	Weight (g)	Brain coefficient
Control	419.25±13.87	0.64±0.08
25mg/kg PbS NPs	410.38±11.23	0.69±0.09
50mg/kg PbS NPs	422.07±16.19	0.73±0.06 [●]
100mg/kg PbS NPs	417.73±12.31	0.81±0.07 ^{●▲}

Notes: [●]: compared with control group $P<0.05$; [▲]: compared with 25mg/kg PbS NPs group, $P<0.05$;

Table S2 MOD comparison of tunel staining in hippocampus (mean±SD, n=10)

groups	Weight (g)
Control	0.18±0.01
25mg/kg PbS NPs	0.27±0.03 [●]
50mg/kg PbS NPs	0.37±0.04 ^{●▲}
100mg/kg PbS NPs	0.54±0.045 ^{●▲■}

Notes: [●]: compared with control group $P<0.05$; [▲]: compared with 25mg/kg PbS NPs group, $P<0.05$; [■]: compared with 50mg/kg PbS NPs group, $P<0.05$.

Table S3 Gene primer sequence

Gene	Primer Sequences	Product (bp)
Nrf2	Forward 5'- CCA TTT ACG GAG ACC CAC -3'	448
	Reverse 3'- CTT ATT TCA ACG GCG AGT -5'	
γ -GCS	Forward 5'-ATG ATA GAA CAC GGG AGG-3'	420
	Reverse3'-CAA ATA CCA CAT AGG CAG-5'	
HO-1	Forward 5'-GAA TTC AGC ATG CCC CAG GAT TTG-3'	261
	Reverse 3'-AGGACG AGT TGT AGG TCG ATC AGA TCT-5'	
GPx-1	Forward 5'-ACC ACG ACC CGG GAC TAC A-3'	102
	Reverse 5'-CTG ATG TCC GAA CTG ATT GCA-3'	
β -actin	Forward 5'-GAG CAC CCT GTG CTG CTC ACC GAG G-3'	266
	Reverse 3'-TCG CAC CGA TGT CGA AGT GGT GGT G5'	

