

Supporting information

Metallofullerene nanoparticles promote osteogenic differentiation of bone marrow stromal cells through BMP signaling pathway

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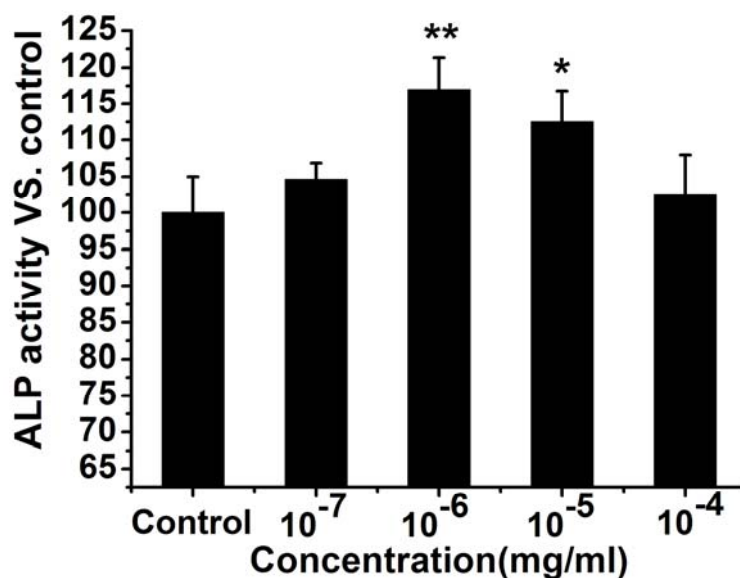


Fig. S1. Effects of $[\text{Gd}@\text{C}_{82}(\text{OH})_{22}]_n$ nanoparticles at different concentration on the ALP activity of MSCs. Results are mean $\pm$ SD of the triplicate experiments. (*) $P < 0.05$; (**) $P < 0.01$.

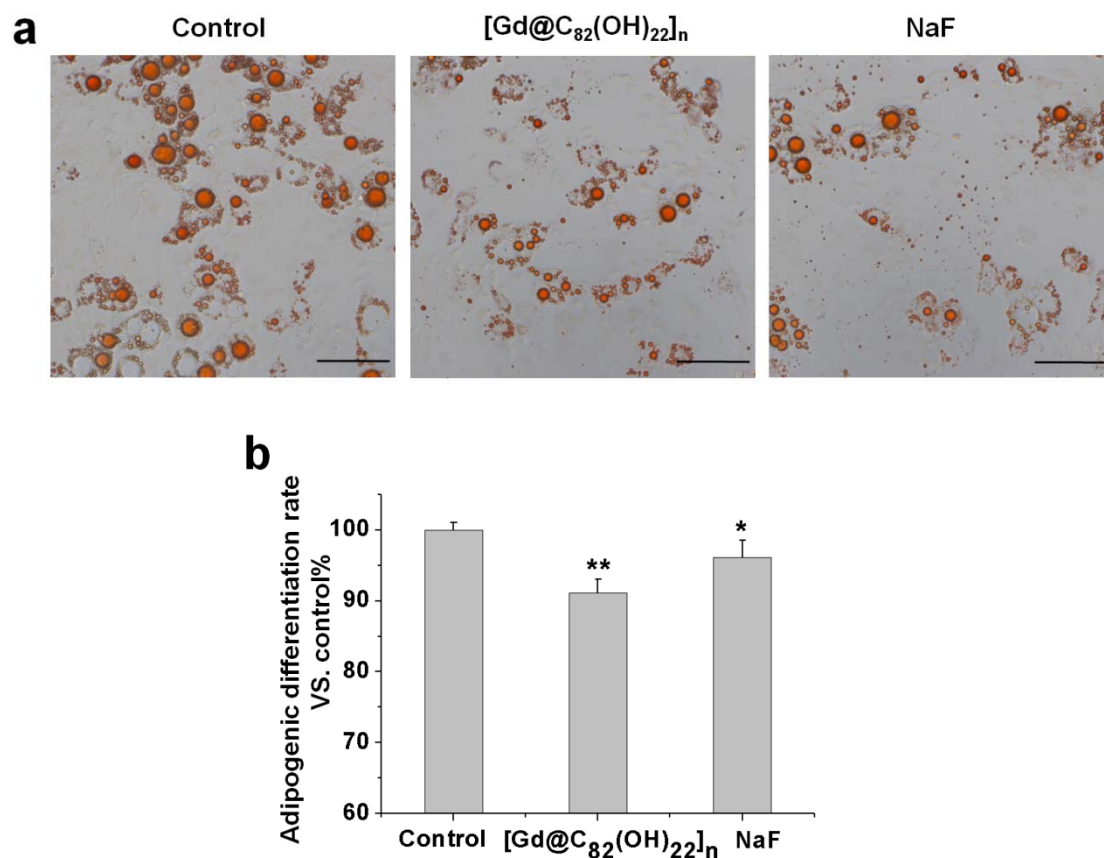


Fig. S2. Effects of $[\text{Gd}@\text{C}_{82}(\text{OH})_{22}]_n$ nanoparticles on the adipogenic differentiation of MSCs. (a) Images of adipogenic differentiation of MSCs stained by oil red O. Scale bars, 100 μm . (b) Effects of $[\text{Gd}@\text{C}_{82}(\text{OH})_{22}]_n$ nanoparticles on the adipogenic differentiation of MSCs.

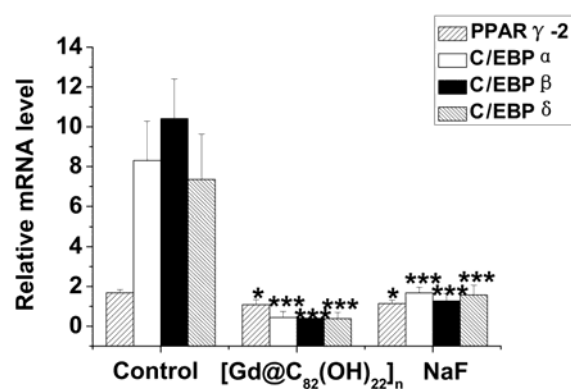


Fig. S3. RT-PCR analysis for the expression of adipogenic differentiation specific genes of MSCs under the induced conditions. Results are mean $\pm$ SD of the triplicate experiments: (*) $P < 0.05$; (**) $P < 0.01$; (***) $P < 0.001$. 1 μM NaF was used as the positive control.

Table S1 Primer Pair Sequences for the RT-PCR Study.

Gene	Forward primer (5'-3')	Reverse primer (5'-3')
ALP	GTT GCC AAG CTG GGA AGA ACA C	CCC ACC CCG CTA TTC CAA AC
BMP2	TGG CCC ATT TAG AGG AGA ACC	AGG CAT GAT AGC CCG GAG G
Runx2	TTC TCC AAC CCA CGA ATG CAC	CAG GTA CGT GTG GTA GTG AGT
PPAR γ 2	TGT GGG GAT AAA GCA TCA GGC	CCG GCA GTT AAG ATC ACA CCT AT
E/CBP α	GTG CTT CAT GGA GCA AGC CAA	TGT CGA TGG AGT GCT CGT TCT
E/CBP β	GCG CGA GCG CAA CAA CAT CG	CAG CAC AGG CTG TTG ACC ATC ATA
E/CBP δ	GAG CGT CCT ACG CGC CAG TAC	GAT CAC GGA GCT GTG CCG GTC
GAPDH	GAC TTC AAC AGC AAC TCC CAC	TCC ACC ACC CTG TTG CTG TA