

## Supporting Information

### Amino acid modified gadofullerene protects against insulin resistance induced by oxidative stress in 3T3-L1 adipocytes

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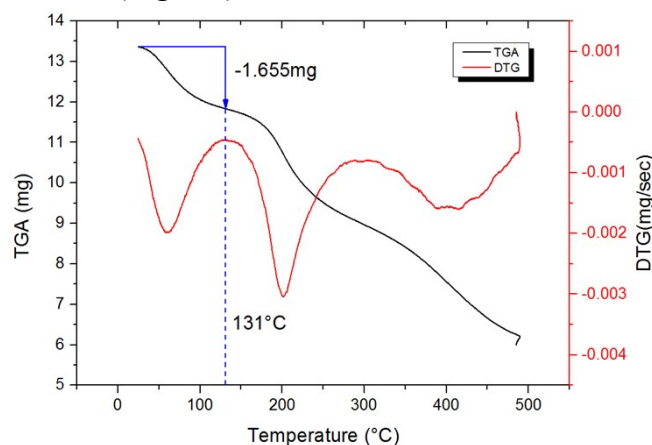
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#### 1. Characterizations of GF-Ala.

Solid GF-Ala NPs were obtained by freeze drying, then characterized by elemental analysis (EA), TGA and XPS. The TGA result showed GF-Ala contained 12.4% moisture (Fig. S1).

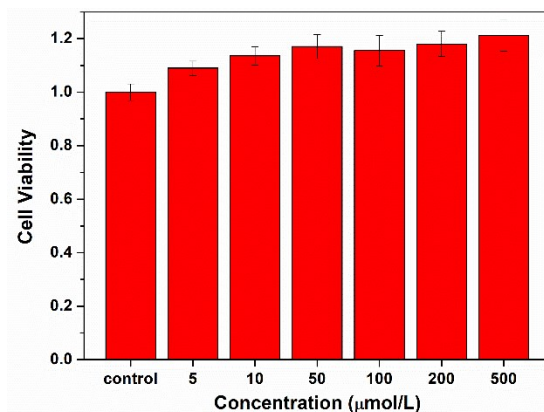


**Fig. S1** Thermogravimetric analysis by a TGA spectrometer to determine the contents of water in GF-Ala (under N<sub>2</sub>, 5°C/min, 20-500°C).

**Table S1** Elemental analysis of carbon, hydrogen, and nitrogen contents in GF-Ala.

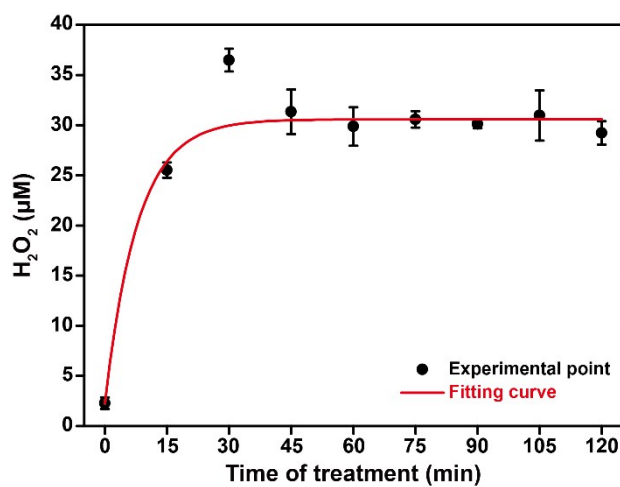
	C (%)	H (%)	N (%)
GF-Ala	55.36	2.81	3.34

## 2. Cytotoxicity tests of GF-Ala



**Fig. S2** Cell viability of 3T3-L1 adipocytes incubated with GF-Ala at various concentration in the dark for 24 h.

## 3. Concentration of H<sub>2</sub>O<sub>2</sub> generated by glucose oxidase



**Fig. S3** Concentration of H<sub>2</sub>O<sub>2</sub> generated by glucose oxidase.