

1 Supplementary data:

2 Carbon dots from roasted chicken accumulated  
3 in lysosome and induced lysosome-dependent  
4 cell death

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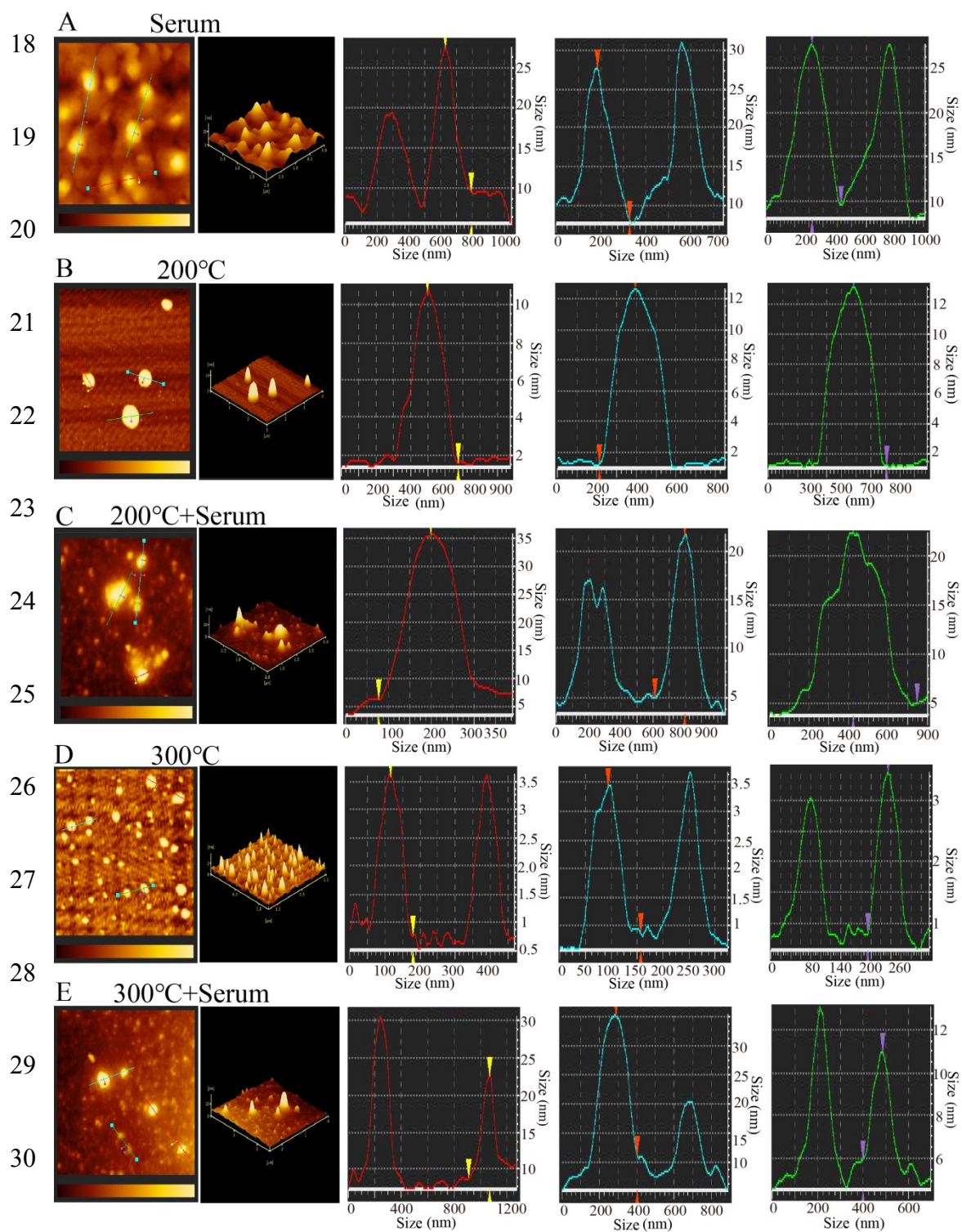
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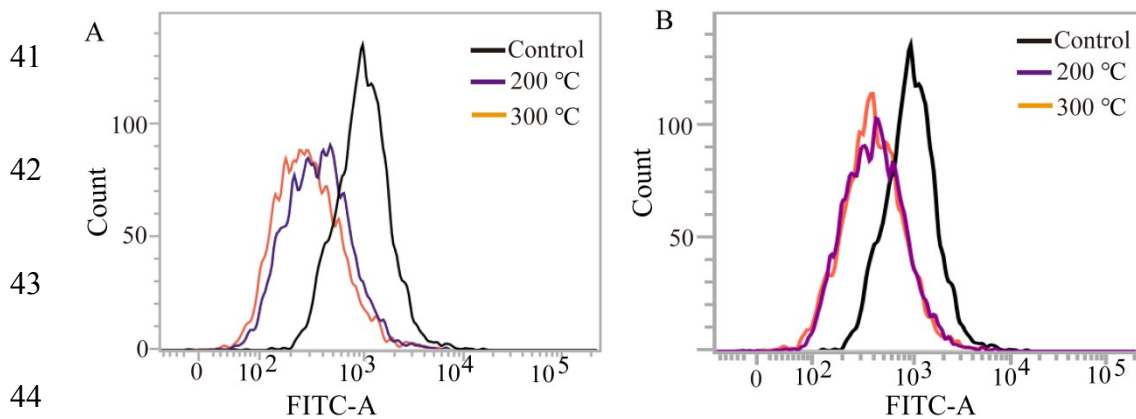
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32 **Fig. S1 Aggregation of CDs in full medium.** (A) The DMEM with 10 % FBS were  
 33 cultured in 37 °C, 5 % CO<sub>2</sub> for 2 h and scanned by atomic force microscopy (AFM).  
 34 (B) CDs from the chicken breasts heated at 200 °C were cultured with serum free

35 medium in 37 °C, 5 % CO<sub>2</sub> for 2 h and scanned by AFM. (C) CDs from the chicken  
36 breasts heated at 200 °C were cultured with full medium in 37 °C, 5 % CO<sub>2</sub> for 2 h and  
37 scanned by AFM. (D) CDs from the chicken breasts heated at 300 °C were cultured  
38 with serum free medium in 37 °C, 5 % CO<sub>2</sub> for 2 h and scanned by AFM. (E) CDs from  
39 the chicken breasts heated at 300 °C were cultured with full medium in 37 °C, 5 % CO<sub>2</sub>  
40 for 2 h and scanned by AFM.



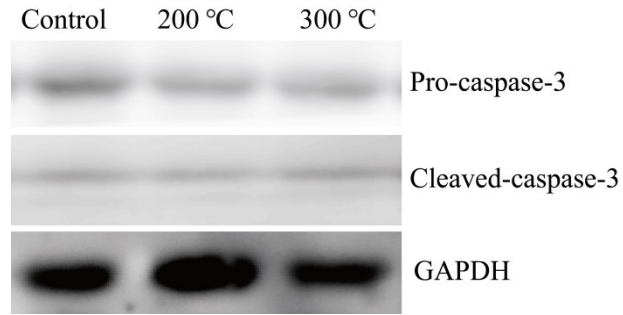
45 **Fig. S2 CDs increased pH of lysosome in Caco-2 cells.** (A) The Caco-2 cells were  
46 treated with 3 mg/mL CDs from the chicken breasts heated at 200 or 300 °C for 3 h.  
47 (B) The Caco-2 cells were treated with 1 mg/mL CDs from the chicken breasts heated  
48 at 200 or 300 °C for 3 h. The lysosomal pH was analyzed by flow cytometry after  
49 stained with 10 µg/mL LysoSensor DND189 for 30 min.

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55 **Figure S3.** No increase of caspase-3 level was induced by the CDs from chicken breasts  
56 roasted at 200 or 300 °C, which were added in the NRK cells for 12 h, and the protein  
57 level of pro-caspase-3, cleaved-caspase-3 or GAPDH was tested by the method of  
58 western blot.

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