

## **Electronic Supplementary Information (ESI)**

### **Se/Ru nanoparticles as an inhibitor of metal-induced A $\beta$ aggregation in Alzheimer's disease**

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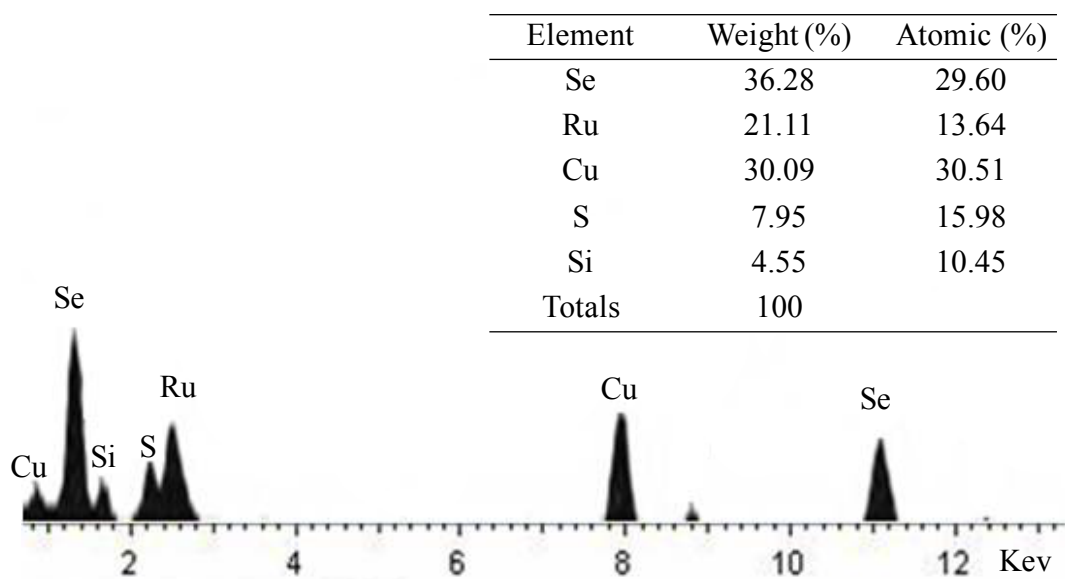


Figure S1. EDX analysis of Se/RuNPs.

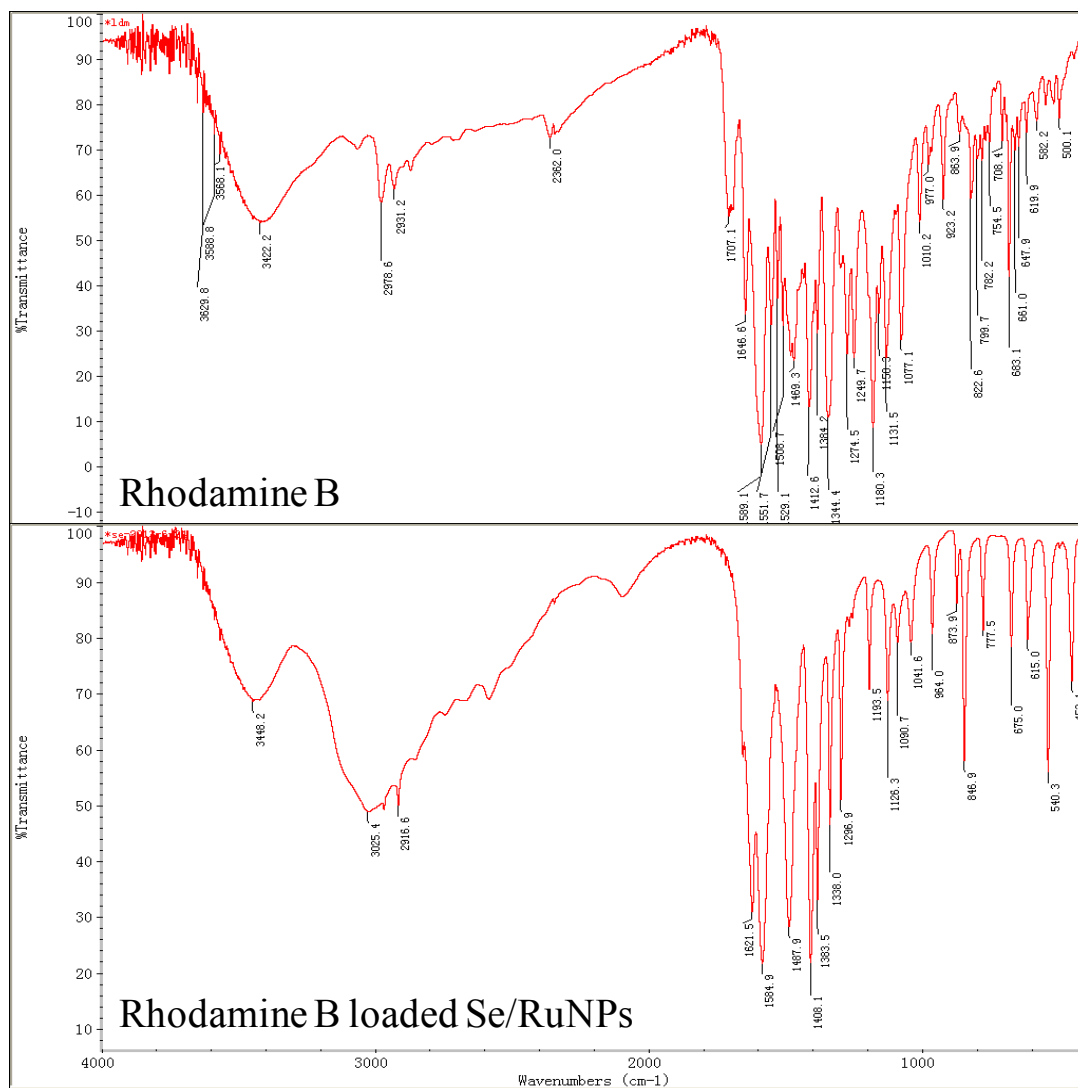


Figure S2. FT-IR spectra of Rhodamine B and Rhodamine B loaded nanoparticles. Nanoparticles were centrifuged at 13000 g for 30 min and the sediment was dried in room temperature.

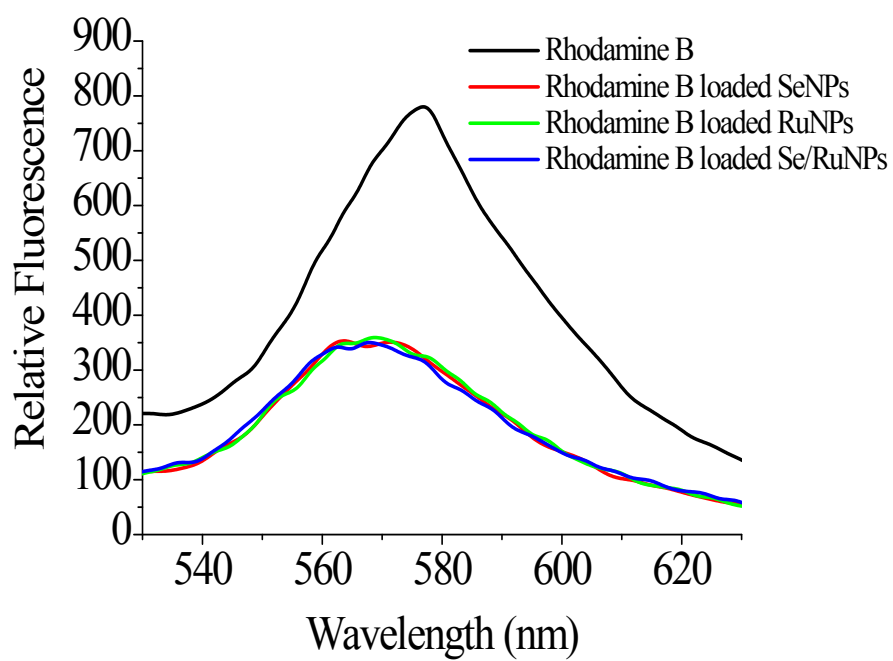


Figure S3. The emission spectrum of Rhodamine B loaded nanoparticles.

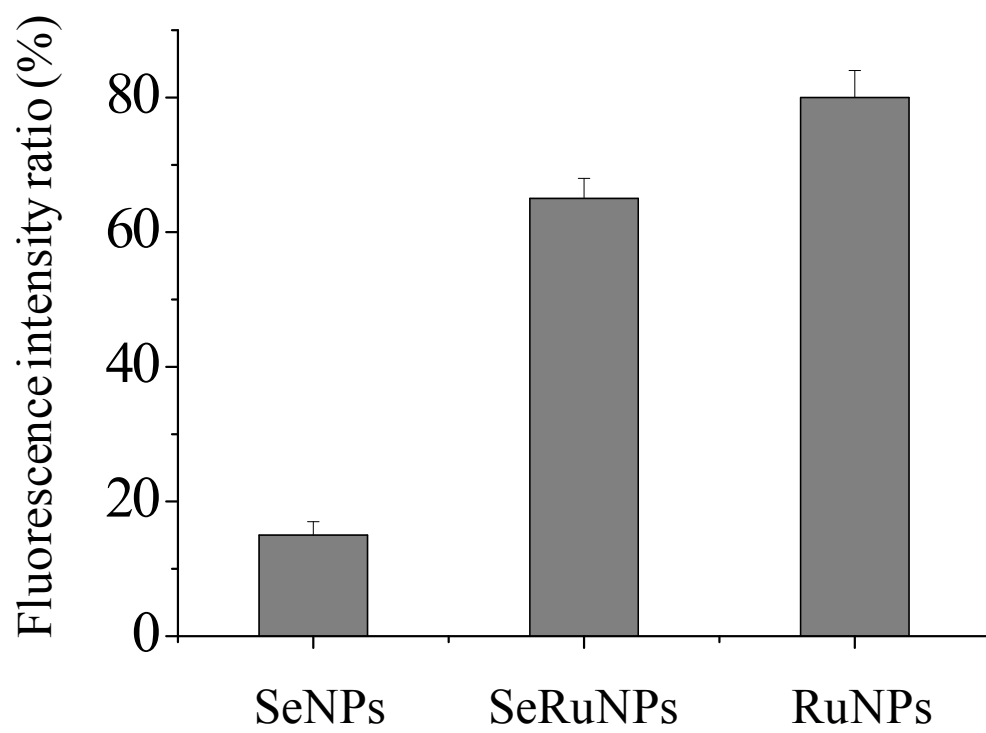


Figure S4. The fluorescence intensity ratio of nanoparticles on  $A\beta_{40}$  fibers.

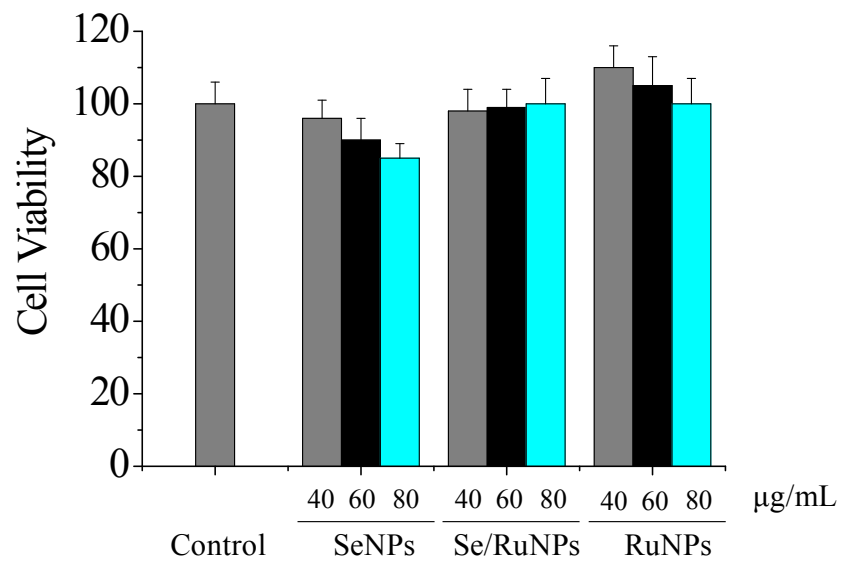


Figure S5. The neurotoxicity of nanoparticles.

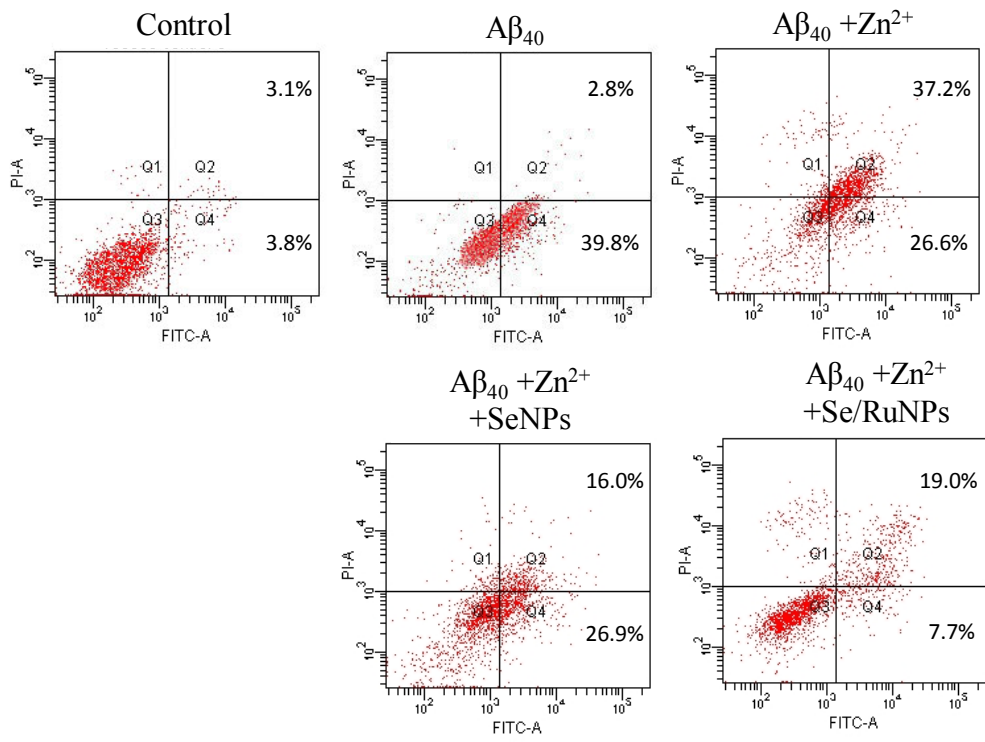


Figure S6. Se/RuNPs prevent the cell death induced by A $\beta_{40}$  in PC12 cells. Apoptotic cell death induced by A $\beta_{40}$  was determined by flow cytometry.