## Systematic Investigation on the Intracellular Trafficking Network of Polymeric Nanoparticles

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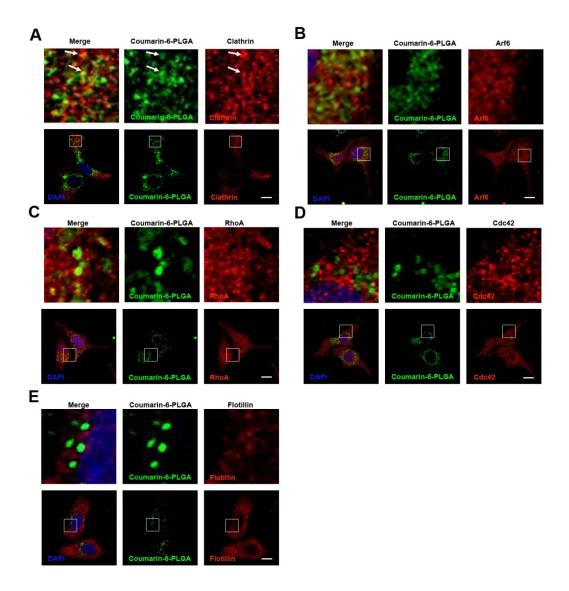


Fig. S1. Confocal images of HeLa cells, which were treated with 100  $\mu$ g/mL C-6-loaded PLGA nanoparticles for 20 hours. Clathrin, Arf-6, RhoA, Cdc42 and Flotillin were detected with primary antibodies against Clathrin, Arf-6, RhoA, Cdc42 and Flotillin, respectively. (A-E) Scale bars: 10  $\mu$ m.

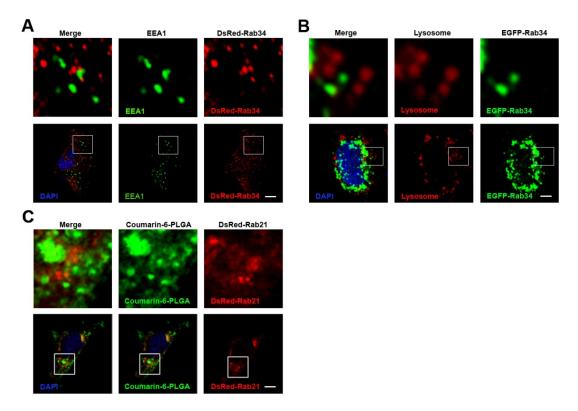


Fig. S2. (A) EEA1 was detected in DsRed-Rab34 transfected HeLa cells with a primary antibody against EEA1; (B) For lysosome detection, the HeLa cells were transfected with DsRed-Rab34, treated with 100  $\mu$ g/mL C-6-loaded PLGA nanoparticles for 20 h, and then co-treated with Lyso-Tracker Red probes for 30 min. (C) DsRed-Rab21 transfected HeLa cells were treated with 100  $\mu$ g/mL C-6-loaded PLGA nanoparticles for 20 h. Scale bars: 10  $\mu$ m.

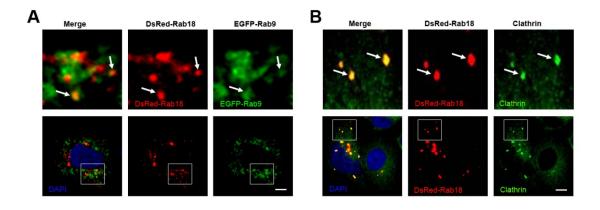


Fig. S3. (A) EGFP-Rab9 cells were co-transfected with DsRed-Rab18; (B) Clathrin was detected in DsRed-Rab18 transfected HeLa cells with a primary antibody against Clathrin. Scale bars:  $10~\mu m$ .

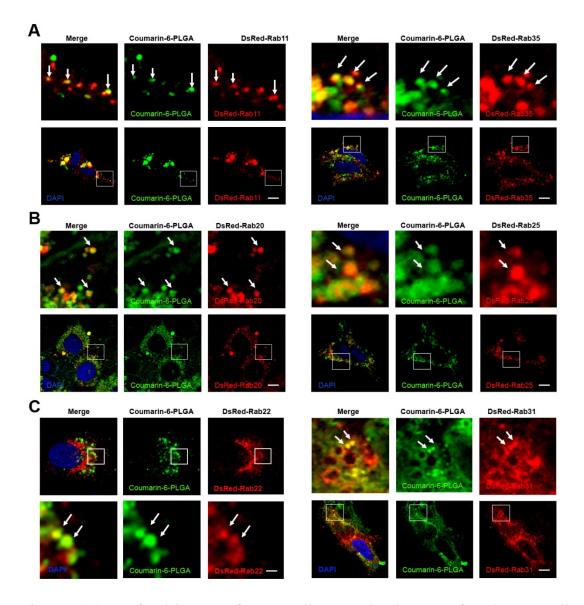


Fig. S4. (A) Confocal images of HeLa cells, DsRed-Rab23 transfected HeLa cells were treated with 100  $\mu$ g/mL Coumarin-6-loaded PLGA nanoparticles for 20 h; (B-E) DsRed-Rab23 cells were queried by primary antibodies against RhoA, Cdc42, Flotillin and Arf-6, respectively. Scale bars: 10  $\mu$ m.

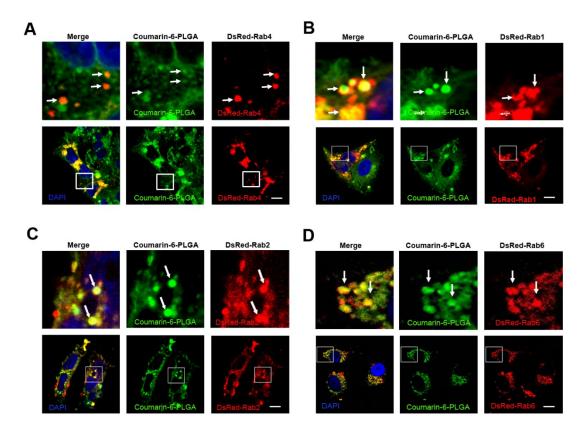


Fig. S5. (A) Confocal images of HeLa cells. DsRed-Rab4, DsRed-Rab1, DsRed-Rab2 and DsRed-Rab6 transfected HeLa cells, respectively. Then treated with 100  $\mu g/mL$  Coumarin-6-loaded PLGA nanoparticles for 20 h; Scale bars: 10  $\mu m$ 

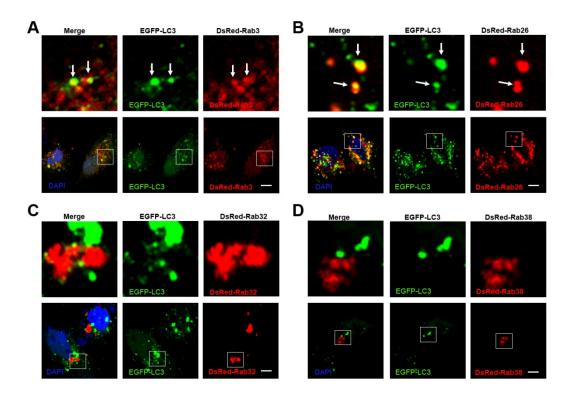


Fig. S6. (A-D) Confocal images of DsRed-Rab3, DsRed-Rab26, DsRed-Rab32 and DsRed-Rab38 HeLa cells co-transfected with 100  $\mu$ g/mL EGFP-LC3, respectively. Scale bars: 10  $\mu$ m.