Exosome Isolation: Density Gradient Ultracentrifugation

1. Remove cells and cell debris
   - Low force centrifugation: 750 x g, 15 mins; 2,000 x g, 15 mins

2. Remove smaller debris
   - Centrifuge and filter: 10,000 x g, 45 mins, 4°C

3. Pellet the exosomes
   - Centrifuge: 100,000 x g, 90 mins

4. Resuspend the pellet

5. Layer onto density gradient and ultracentrifuge
   - Centrifuge: 100,000 x g, 18 hours, 4°C

6. Ultracentrifuge the gradient fractions
   - Centrifuge: 100,000 x g, 60 mins

7. Size determination analysis

8. Experimental characterization of exosomes

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