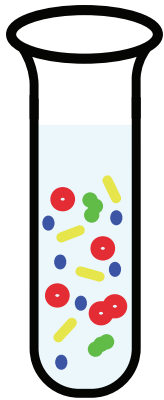


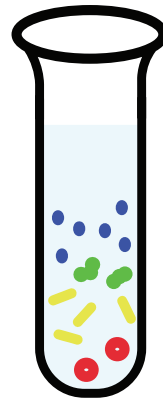
Exosome Isolation: Density Gradient Ultracentrifugation



1

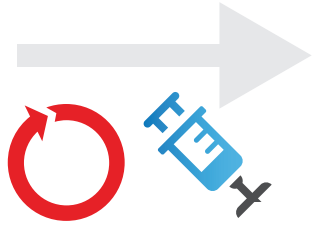
Remove cells and cell debris

Low force centrifugation:
750 x g, 15 mins; 2,000 x g, 15 mins

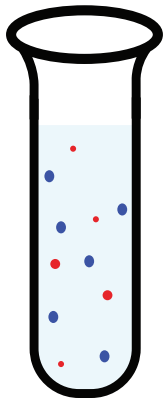


2

Remove smaller debris



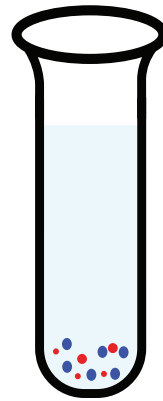
Centrifuge and filter:
10,000 x g, 45 mins, 4°C



3

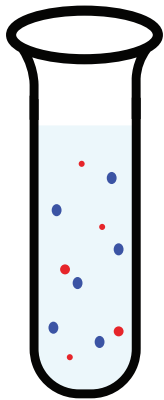
Pellet the exosomes

Centrifuge:
100,000 x g, 90 mins



4

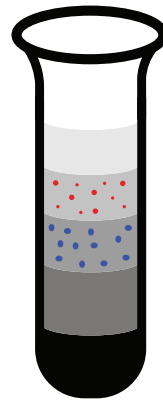
Resuspend the pellet



5

Layer onto density gradient and ultracentrifuge

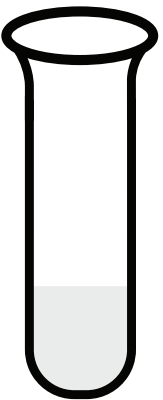
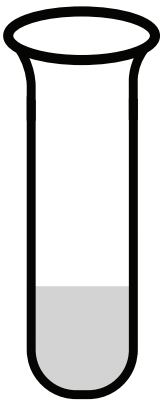
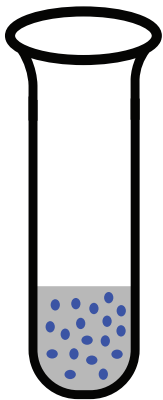
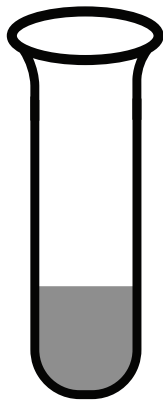
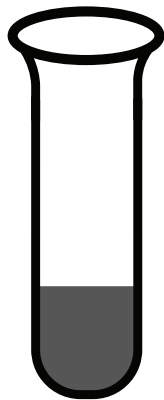
Centrifuge:
100,000 x g, 18 hours, 4°C



6

Ultracentrifuge the gradient fractions

Centrifuge:
100,000 x g, 60 mins



7

Size determination analysis

8

Experimental characterization of exosomes