

Materials List for:

# Cell Labeling and Targeting with Superparamagnetic Iron Oxide Nanoparticles

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## Materials

| Name                                                                                            | Company         | Catalog Number | Comments                                                                 |
|-------------------------------------------------------------------------------------------------|-----------------|----------------|--------------------------------------------------------------------------|
| Ammonium Hydroxide solution, 28% NH <sub>3</sub> in H <sub>2</sub> O, ≥99.99% trace metal basis | Sigma-Aldrich   | 338818-100ML   | Harmful reagent - wear personal protective equipment                     |
| Dreschel bottle, 500 ml                                                                         | Ace Glass       | 5516-16        |                                                                          |
| Ethyl Acetate, CHROMASOLVR Plus, for HPLC, 99.9%                                                | Sigma-Aldrich   | 650528-1L      | Harmful reagent - wear personal protective equipment & work in fume hood |
| Ethyl alcohol                                                                                   | Sigma-Aldrich   | E7023          | Harmful reagent - wear personal protective equipment                     |
| Evaporating flask, 50 ml, 24/40 joint                                                           | Sigma-Aldrich   | Z515558        | For use with rotoevaporator                                              |
| Filter paper, 3 cm dia, grade 1                                                                 | Fisher          | 09-805P        | For use with glass filter funnel                                         |
| Glass beakers, 1 L                                                                              | Fisher          | FB-101-1000    | For washing SPIONs                                                       |
| Glass filter funnel, vacuum hose adapter, fits 24/40, 30 mL                                     | Fisher          | K954100-0344   |                                                                          |
| Glass vial caps                                                                                 | Fisher          | 03-391-46      | For use with glass vials                                                 |
| Glass vials, 2 ml                                                                               | Fisher          | 03-391-44      | For collecting magnetite gel & SPIONs                                    |
| Hexane, CHROMASOLVR, for HPLC, ≥97.0% (GC)                                                      | Sigma-Aldrich   | 34859-1L       | Harmful reagent - wear personal protective equipment & work in fume hood |
| Hydrochloric acid                                                                               | Sigma-Aldrich   | H1758          | Harmful reagent - wear personal protective equipment & work in fume hood |
| Iron(II) chloride tetrahydrate, ≥99.99% trace metals basis                                      | Sigma-Aldrich   | 380024-5G      | Harmful reagent - wear personal protective equipment                     |
| Iron(III) chloride anhydrous, powder, ≥99.99% trace metals basis                                | Sigma-Aldrich   | 451649-1G      | Harmful reagent - wear personal protective equipment                     |
| Isomantle heater, 500 mL                                                                        | Voight Global   | EM0500/CEX1    |                                                                          |
| Laboratory mixer                                                                                | Silverson       | L5M-A          |                                                                          |
| Lyophilizer                                                                                     | Labconco        | 7670520        |                                                                          |
| Microspatulas                                                                                   | Fisher          | 21-401-25A     | For transferring magnetite gel                                           |
| NdFeB magnet, 1 in x 1 in x 1 in                                                                | Amazing Magnets | C1000H-M       | Very strong magnet, handle with care                                     |
| Oleic acid, ≥99% (GC)                                                                           | Sigma-Aldrich   | O1008-5G       | Store in freezer; Harmful reagent - wear personal protective equipment   |

|                                                              |                     |                          |                                                  |
|--------------------------------------------------------------|---------------------|--------------------------|--------------------------------------------------|
| Overhead stirrer                                             | IKA                 | 2572201                  |                                                  |
| Overhead stirrer clamp                                       | IKA                 | 2664000                  | For use with overhead stirrer                    |
| Overhead stirrer H-stand                                     | IKA                 | 1412000                  | For use with overhead stirrer                    |
| Phosphate buffered saline                                    | Life Technologies   | 10010-023                |                                                  |
| Plastic beakers, 250 ml                                      | Fisher              | 02-591-28                |                                                  |
| PLGA PURASORB PDLG (75/25 blend)                             | Purac               | PDLG 7502                | PDLG 7502A may be used as well; Store in freezer |
| Pluronic F-127 powder, BioReagent, suitable for cell culture | Sigma-Aldrich       | P2443-250G               |                                                  |
| PTFE expandable blade paddle, 8 mm dia                       | SciQuip             | SP4018                   |                                                  |
| PTFE vessel adapter, fits 24/40, 8 mm dia paddle             | Monmouth Scientific | PTFE Vessel Adaptor A480 | For use with PTFE expandable blade paddle        |
| Recirculating chiller                                        | Clarkson            | 696613                   | For use with rotoevaporator                      |
| Reflux condenser, fits 24/40, 250 mm                         | Ace Glass           | 5997-133                 |                                                  |
| Rotoevaporator                                               | Clarkson            | 216949                   |                                                  |
| Rubber septa, fits 24/40                                     | Ace Glass           | 9096-56                  |                                                  |
| Separatory funnel with stopper, 250 ml                       | Fisher              | 10-438E                  |                                                  |
| Sodium sulfate ACS reagent, ≥99.0%, anhydrous, granular      | Sigma-Aldrich       | 239313-500G              |                                                  |
| Three neck round bottom flask, angled, 24/40 joints, 500 ml  | Ace Glass           | 6948-16                  |                                                  |
| Ultrasonic cleaner perforated pan                            | Fisher              | 15-335-20A               | For use with ultrasonic cleaner                  |
| Ultrasonic cleaner, 2.8 L                                    | Fisher              | 15-335-20                |                                                  |
| Vacuum controller                                            | Clarkson            | 216639                   | For use with rotoevaporator (optional)           |
| Vacuum pump                                                  | Clarkson            | 219959                   | For use with rotoevaporator                      |