

Materials List for:

Functionalization of Atomic Force Microscope Cantilevers with Single-T Cells or Single-Particle for Immunological Single-Cell Force Spectroscopy

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Materials

| Name | Company | Catalog Number | Comments |
|---|---|----------------------|--|
| Material | | | |
| 10 µl pipette tip | Thermo Fisher | 104-Q | |
| 15 ml tube | Corning | 430791 | |
| 6 cm diameter culture dish | NALGENE nunc | 150462 | |
| 6-well culture plate | JET | TCP011006 | |
| AFM Cantilever | NanoWorld | Arrow-TL1-50 | tipless cantilever |
| β-Mercaptoethanol | Sigma | 7604 | |
| Biocompatible glue | BD Cell-Tak | 354240 | |
| CD4+ T cell isolation Cocktail | STEMCELL | 19852C.1 | |
| DC2.4 cell line | A gift from K. Rock (University of Massachusetts Medical School, Worcester, MA) | | |
| Dextran-coated magnetic particles | STEMCELL | SV30010 | |
| EDTA | GENEray | Generay-E1101-500 ml | |
| Epoxy | ERGO | 7100 | |
| Ethanol | twbio | 00019 | |
| FBS | Ex Cell Bio | FSP500 | |
| FcR blocker | STEMCELL | 18731 | |
| Glass coverslip | local vender (Hai Men Lian Sheng) | HX-E37 | 24mm diameter, 0.17mm thickness |
| Glass slides | JinTong department of laboratory and equipment management, Haimen | N/A | customized |
| H ₂ O ₂ (30%) | Sino pharm | 10011218 | |
| H ₂ SO ₄ | Sino pharm | 80120892 | |
| HEPES | Sigma | 51558 | |
| Magnet | STEMCELL | 18000 | |
| Mesh nylon strainer | BD Falcon | REF 352350 | |
| Moesin-EGFP | N/A | | cloned in laboratory |
| Mouse CD25 Treg cell positive isolation kit | STEMCELL | 18782 | Component: FcR Blocker,Regulatory T cell Positive Selection Cocktail, PE Selection Cocktail, Dextran RapidSpheres, |
| Mouse CD4 ⁺ Tcell isolation kit | STEMCELL | 19852 | Component:CD4+T cell isolation Cocktail, Streptavidin RapidSpheres, Rat Serum |

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|---|---|------------------------|-----------------|
| NaOH | Lanyi chemical products co., LTD? Beijing | 1310-73-2 | |
| PBS | Solarbio | P1022-500 | |
| PE selection cocktail | STEMCELL | 18151 | |
| Penicillin-Streptomycin | Hyclone | SV30010 | |
| PLCδ-PH-mCherry | Addgene | 36075 | |
| Polystyrene microspheres 6.0µm | Polysciences | 07312-5 | |
| polystyrene round bottom tube | BD Falcon | 352054 | |
| Rat serum | STEMCELL | 13551 | |
| RAW264.7 | ATCC | | |
| Recombinant Human Interleukin-2 | Peprotech | Peprotech, 200-02-1000 | |
| Red blood cell lysis buffer | Beyotime | C3702 | |
| Regulatory T cell positive selection cocktail | STEMCELL | 18782C | |
| RPMI 1640 | Life | C11875500BT | |
| Sample chamber | Home made | | |
| Streptavidin-coated magnetic particles | STEMCELL | 50001 | |
| Transfection kit | Clontech | 631318 | |
| Trypsin 0.25% EDTA | Life | 25200114 | |
| Tweezers | JD | N/A | |
| Name | Company | Catalog Number | Comments |
| Equipment | | | |
| 20x objective NA 0.8 | Zeiss | 420650-9901 | Plan-Apochromat |
| Atomic force microscope | JPK | cellHesion200 | |
| Centrifuge | Beckman coulter | Allegra X-12R | |
| Fluorescence imaging | home-made objective-type total internal reflection fluorescence microscop based on a Zeiss microscope stand | | |
| Humidified CO ₂ incubator | Thermo Fisher | HERACELL 150i | |
| Inverted light microscope | Zeiss | Observer A1 manual | |