

Table S3

Detailed list of clinical-grade reagents used in iPSC generation and RPE differentiation

| Reagents | Vendor | Catalogue | Use description |
|--|----------------------------|------------------------|--------------------------------------|
| Plasmid 149 | Aldevron | p149 | Reprogramming |
| Plasmid 150 | Aldevron | p150 | Reprogramming |
| ViCell concentration control 8X106 Beads/mL | Beckman Coulter | B78897 | Differentiation |
| CryoStor CS10 | BioLife Solutions | 210102 | Ficoll/Reprogramming/Differentiation |
| TPO 50 ug | CellGenix | 1017-050 | Reprogramming |
| triCitrasol | Citra Labs | PN6030 | Ficoll |
| Fetal Bovine Serum (U.S.), Characterized | GE Healthcare (Hyclone) | SH30071.03 | Differentiation |
| DNase I (PULMOZYME) (2 ug in 2 mL) | Genentech | 50242-100-040 10039 | Reprogramming |
| Lymphocyte Separation Medium | Lonza/corning | 17-829E/25- 072-C1 | Ficoll |
| CD34 Nucleofactor® Solution | Lonza | VPA-1003 | Reprogramming |
| CD34 Nucleofactor® Supplement | Lonza | VPA-1003 | Reprogramming |
| DPBS without Ca ⁺⁺ and Mg ⁺⁺ | Lonza/Life Technology | 17- 512F/14190250 | Ficoll/Reprogramming/Differentiation |
| Versene Solution | Thermo Fisher | 15040-066 | Reprogramming/Differentiation |
| Recombinant hLIF (10 ug/ml) | Millipore | LIF1010 | Reprogramming |
| H-1152 (1 mg) | Millipore | 555550 | Differentiation |
| CliniMACS® PBS/EDTA Buffer | Miltenyi Biotec | 700-25 | Reprogramming |
| ClimiMACs CD34+ microbeads | Miltenyi Biotec | 171-01 | Reprogramming |
| CliniMACS CD56 microbeads | Miltenyi Biotec | 130-019-401 | Differentiation |
| CliniMACS Anti-Biotin microbeads | Miltenyi Biotec | 130-019-201 | Differentiation |
| Mouse Anti-CD24 (Biotin Conjugated) | Miltenyi Biotec | Custom made | Differentiation |
| DMSO | Mylan Institutional | 67457-178-10 | Reprogramming/Differentiation |
| Flt-3 (50ug) | R&D Systems | 308-GMP-050 | Reprogramming |
| SCF (50ug) | R&D Systems | 255-GMP-050 | Reprogramming |
| IL-6 (50ug) | R&D Systems | 206-GMP-050 | Reprogramming |
| IL-3 (50ug) | R&D Systems | 203-GMP-050 | Reprogramming |
| Recombinant Human Activin A, Animal-Free (60 ug, 645 ul /vial, 0.094 mg/ml) CUSTOM VIALED | R&D Systems | AFL 338 | Differentiation |
| Recombinant Human IGF-I, Animal-Free (5.5 ug, 55 uL)- CUSTOM VIALED | R&D Systems | 291-GMP- 5.5ug | Differentiation |
| PGE2 (10 mg) | R&D Systems | 2296 | Differentiation |

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| SB431542 Hydrate (10 mg) | R&D Systems | 1614 | Differentiation |
| Blebbistatin (5 mg) | Sigma Aldrich | B0560 | Differentiation |
| Ascorbic Acid (2 g) | Sigma Aldrich | PHR1008-2G | Differentiation |
| CKI-7 Dihydrochloride (5 mg) | Sigma Aldrich | C0742-5mg | Differentiation |
| Niacinamide (1g) | Sigma Aldrich | PHR1033-1G | Differentiation |
| Taurine (1g) | Sigma Aldrich | PHR1109-1G | Differentiation |
| Hydrocortisone (50 uM) | Sigma Aldrich | H-6909 | Differentiation |
| 3,3',5-Triiodo-L-thyronine sodium salt (1 mg) | Sigma Aldrich | T5516 | Differentiation |
| Y-27632 (1mg) | Sigma Aldrich | Y0503-1MG | Reprogramming |
| Beta-Mercaptoethanol | Sigma Aldrich | 07604 | Reprogramming |
| HA-100 (5 mg) | StemCell Technologies | 72482 | Reprogramming |
| StemSpan ACF | StemCell Technologies | 09805 | Reprogramming |
| CHIR99021 (2 mg) | Stemgent | 04-0004-02 | Reprogramming |
| A-83-01 (2 mg) | Stemgent | 04-0014 | Reprogramming |
| LDN-193189 (10 mg) | Stemgent | 04-0074-10 | Differentiation |
| PD325901 (2mg) | Stemgent | 04-0006 | Differentiation |
| Retronectin (2.5 mg) | Takara | T202 | Reprogramming |
| UltraPure 0.5M EDTA, pH 8 | Thermo Fisher | 15575-020 | Differentiation |
| CTS N2 Supplement (100 X) | Thermo Fisher | A13707-01 | Reprogramming/Differentiation |
| 100x Glutamax | Thermo Fisher | 35050-061 | Reprogramming |
| E8 Basal medium | Thermo Fisher | A15169-01 | Reprogramming/Differentiation |
| E8 supplement | Thermo Fisher | A15170-01 | Reprogramming |
| CTS Vitronectin (VTN-N) | Thermo Fisher | A27940 | Reprogramming/Differentiation |
| DMEM/F12, HEPES | Thermo Fisher | 11330-032 | Reprogramming/Differentiation |
| MEM Alpha, nucleosides | Thermo Fisher | 12571-063 | Differentiation |
| MEM non-essential AA | Thermo Fisher | 11140-050 | Differentiation |
| Sodium Pyruvate (100 mM) | Thermo Fisher | 11360-070 | Differentiation |
| CTS KnockOut™ SR XenoFree | Thermo Fisher | A1099201 | Differentiation |
| B-27 Supplement 50 X, Serum free | Thermo Fisher | 17504-044 | Differentiation |
| CTS TrypLE Select Enzyme | Thermo Fisher | A12859-01 | Reprogramming/Differentiation |
| Water for injection (WFI) | APP Pharmaceuticals | NDC-63323-185-10 | Reprogramming/Differentiation |
| CTS B-27 Supplement, XenoFree | Thermo Fisher | A14867-01 | Reprogramming |
| Recombinant human FGF2 (0.1 mg/ml) | Waisman Biomanufacturing | WC-FGF2-FP-003 | Reprogramming |
| 10 M NaOH | Sigma Aldrich | 72068 | Differentiation |
| ViCell Reagent Pack | Beckman Coulter | 383722 | Differentiation |

Certificate of Analysis for all reagents have been validated for all these reagents for our clinical-grade manufacturing processes.