**TABLE S5: KEY RESOURCES**

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| **REAGENT** | **DILUTION** | | **SOURCE** | **IDENTIFIER** |
| **Antibodies** |  | |  |  |
| Cleaved Caspase 3 | 1:100 | | Cell Signaling | 9664 |
| CD117 (c-Kit) | 1:100 | | Novus Biologicals | AF1356 |
| Sca-1/Ly6 | 1:150 | | R&D systems | MAB1226 |
| CD44 (1M7.8.1) | 1:100 | | Novus Biologicals | NBP2-22436 |
| CD90.1 | 1:100 | | Novus Biologicals | NBP2-00312 |
| CD29/ Integrin beta 1 | 1:50 | | Novus Biologicals | NBP2-36561 |
| CD45R (RA3-6B2) | 1:100 | | Novus Biologicals | NB100-77420 |
| Ki-67 (D3B5) | 1:50 | | NEB | 12202T |
| CD133 | 1:200 | | Proteintech | 66666-1-Ig |
| Alpha-Fetoprotein/AFP | 1:100 | | Novus Biologicals | NBP1-76275 |
| Albumin | 1:100 | | Novus Biologicals | AF3329 |
| STRO-1 | 1:50 | | Novus Biologicals | NBP1-48356 |
| CD105/ Endoglin | 1:50 | | Novus Biologicals | NBP2-22122 |
| VCAM-1/CD106 | 1:50 | | R&D systems | MAB8091 |
| CD146/MCAM | 1:100 | | Novus Biologicals | AF932 |
| CD19 | 1:100 | | Novus Biologicals | NBP2-25196 |
| Human ALCAM/CD166 | 1:100 | | R&D systems | MAB6563 |
| EpCAM (D4K8R) | 1:50 | | NEB | 36746T |
| Cytokeratin 7 | 1:100 | | Novus Biologicals | NBP2-44814 |
| Cytokeratin 19 | 1:100 | | Novus Biologicals | NB100-687 |
| Human p63/TP73L | 1:100 | | R&D systems | AF1916 |
| CD71/Human TfR (Transferrin R) | 1:100 | | R&D systems | AF2474 |
| Cytokeratin 1 | 1:100 | | Novus Biologicals | NB100-2756 |
| Keratin 5 (E2T4B) XP | 1:100 | | NEB | 71536T |
| GFP |  | |  |  |
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| Cy5 AffiniPure Donkey Anti-Mouse IgG (H+L) | 1:200 | | Jackson ImmunoResearch | 715-175-151 |
| Cy5 AffiniPure Donkey Anti-Rabbit IgG (H+L) | 1:200 | | Jackson ImmunoResearch | 711-175-152 |
| Alexa Fluor Donkey anti goat 488 | 1:200 | | Invitrogen | A32814 |
| Alexa Fluor Goat anti mouse 488 | 1:200 | | Invitrogen | A32723 |
| Alexa Fluor Goat anti rabbit 488 | 1:200 | | Invitrogen | A-11008 |
| Alexa Fluor Goat anti mouse 546 | 1:200 | | Invitrogen | A-11030 |
| Alexa Fluor Donkey anti goat 546 | 1:200 | | Invitrogen | A-11056 |
| Alexa Fluor Donkey anti rat 488 | 1:200 | | Invitrogen | A48269 |
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| **Recombinant Growth Factors** | |  | |  |
| Recombinant Murine bFGF | | PeproTech | | 450-33 |
| Recombinant Murine EGF | | Stemcell technologies | | 78016.1 |
| Recombinant Murine IGF-I | | Stemcell technologies | | 78078.1 |
| Human Recombinant bFGF | | Stemcell technologies | | 78003 |
| Human Recombinant EGF | | Stemcell technologies | | 78006.1 |
| Human Recombinant IGF-I | | Stemcell technologies | | 78022.1 |
| Recombinant Human HGF | | PeproTech | | 100-39H |
| Mouse Collagen IV | | R&D systems | | 3410-010-02 |
| Human Collagen IV | | Sigma-Aldrich | | C7521 |
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| **Plates** | |  | |  |
| Costar 6-well Clear Flat Bottom ULA Plate | | Corning | | 3471 |
| Corning 96-well Clear Round Bottom ULA Plate | | Corning | | 7007 |
| 96 well tissue culture Flat Bottom Plates | | Fisher Scientific | | 0720089 |
| Nunc Lab-Tek Chamber Slide System- 2 wells | | Fisher Scientific | | 177380 |
| Nunc Lab-Tek Chamber Slide System- 8 wells | | Fisher Scientific | | 177402 |
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| **Chemicals** | |  | |  |
| Dexamethasone | | Cayman Chemical | | 11015 |
| 3-Isobutyl-1-methylxanthine | | Cayman Chemical | | 13347 |
| Y-27632 (hydrochloride) | | Cayman Chemical | | 10005583 |
| 1-Oleoyl Lysophosphatidic Acid | | Cayman Chemical | | 10010093-1 |
| Sphingosine-1-phosphate (S1P) | | Cayman Chemical | | 62570-1 |
| A 83-01 | | Cayman Chemical | | 9001799-5 |
| CHIR99021 | | Cayman Chemical | | 13122-1 |
| Ascorbic Acid | | Sigma-Aldrich | | A8960 |
| BGP (β-Glycererol Phosphate) | | Sigma-Aldrich | | G9891 |
| Indomethacin | | Sigma-Aldrich | | I8280 |
| 3-Isobutyl-1-methylxanthine (IBMX) | | Cayman Chemical | | 13347 |
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| **Media/supplements** | |  | |  |
| William's E Medium | | Fisher Scientific | | A1217601 |
| StemXVivo Osteogenic/Adipogenic Base  Media | | R&D systems | | CCM007 |
| Gibco DMEM/F-12 | | Fisher Scientific | | 11-330-032 |
| ITS Liquid Media Supplement (100×) | | Sigma-Aldrich | | I3146-5ML |
| Primary Hepatocyte Maintenance  Supplements | | Fisher Scientific | | CM4000 |
| EpiLife Medium, with 60 μM calcium | | Fisher Scientific | | MEPI500CA |
| Human Keratinocyte Growth Supplement | | Fisher Scientific | | S-001-5 |
| Penicillin-Streptomycin | | Fisher Scientific | | 15140122 |
| L-Glutamine | | Fisher Scientific | | 25030081 |
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| **Experimental Models: Strains/Cells** | |  | |  |
| C57BL/6J mice | | The Jackson Laboratory | | 000664 |
| FVB/NJ mice | | The Jackson Laboratory | | 001800 |
| Ly6a-GFP mice | | The Jackson Laboratory | | 012643 |
| Primary Human Fibroblast, Skin (Arm), 11 YR | | Coriell Institute for Medical Research | | GM00323 |
| Primary Human Fibroblast, Skin, 9 YR | | Coriell Institute for Medical Research | | GM00038 |
| Primary Human Dermal Fibroblast (49 YR) | | Zenbio | | DDFM063011A |
| Primary Human Hepatocytes (25 YR) | | Zenbio | | Catalog# HPF; lot# ZBH1989-P |
| Primary Human Hepatocytes (31 YR) | | Sigma-Aldrich | | MTOXH1001; lot# LHuf15102 |
| Human Keratinocytes from Skin, Foreskin | | Coriell Institute for Medical Research | | GM22267 |
| Human Epidermal Keratinocytes, adult (HEKa) | | Fisher Scientific | | C0055C |

(Type B hepatitis and normal liver tissue array (IC03001) was purchased from United States BioMax (Rockville, MD, United States).