

Materials List for:

Bioprinting Cellularized Constructs Using a Tissue-specific Hydrogel Bioink

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URL: <https://www.jove.com/video/53606>

DOI: [doi:10.3791/53606](https://doi.org/10.3791/53606)

Materials

| Name | Company | Catalog Number | Comments |
|--|------------------------|----------------|--|
| Hyaluronic acid | Sigma | 53747 | |
| Gelatin | Sigma | G6144 | |
| 2-Hydroxy-4'-(2-hydroxyethoxy)-2-methylpropiophenone | Sigma | 410896 | |
| Hyaluronic acid and gelatin hydrogel kit (HyStem-HP) | ESI-BIO | GS315 | Kit contains the components Heprasil (thiolated and heparinized hyaluronic acid), Gelin-S (thiolated gelatin), and Extralink (PEGDA) |
| PEG 8-Arm Alkyne, 10 kDa | Creative PEGWorks | PSB-887 | |
| Primary human hepatocytes | Triangle Research Labs | HUCPM6 | |
| Primary human liver stellate cells | ScienCell | 5300 | |
| Primary human Kupffer cells | Life Technologies | HUKCCS | |
| Hepatocyte Basal Media (HBM) | Lonza | CC-3199 | |
| Hepatocyte Media Supplement Kit | Lonza | CC-3198 | HCM SingleQuot Kits (contains ascorbic acid, 0.5 ml; bovine serum albumin [fatty acid free], 10 ml; gentamicin sulfate/amphotericin B, 0.5 ml; hydrocortisone 21-hemisuccinate, 0.5 ml; insulin, 0.5 ml; human recombinant epidermal growth factor, 0.5 ml; transferrin, 0.5 ml) |
| Triton X-100 | Sigma | T9284 | Other manufacturers are ok. |
| Ammonium hydroxide | Fischer Scientific | A669 | Other manufacturers are ok. |
| Fresh porcine cadaver tissue | n/a | n/a | |
| Lyophilizer | any | n/a | |
| Freezer mill | any | n/a | |
| Bioprinter | n/a | n/a | The bioprinter described herein was custom built in-house. In general, other devices are adequate provided they support computer controlled extrusion-based printing of hydrogel materials. |
| Hanging drop cell culture plate | InSphero | CS-06-001 | InSphero GravityPlus 3D Culture Platform |