# Materials List for:

**Intestinal Stem Cell Isolation and Culture in a Porcine Model of Segmental Small Intestinal Ischemia**

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URL: [https://www.jove.com/video/57647](https://www.jove.com/video/57647)

DOI: doi:10.3791/57647

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## Materials

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Catalog Number</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphate Buffered Saline, Ca2+, Mg 2+ free</td>
<td>Fisher Scientific</td>
<td>BP-399</td>
<td>Dilute 1:10</td>
</tr>
<tr>
<td>Distilled, deionized water (ddH2O)</td>
<td></td>
<td></td>
<td>Used to prepare EDTA and PBS</td>
</tr>
<tr>
<td>Dimethyl Sulfoxide (DMSO)</td>
<td>Thermo Scientific</td>
<td>20688</td>
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</tr>
<tr>
<td>Ethylenediamine tetraacetic acid (EDTA)</td>
<td>Sigma Aldrich</td>
<td>ED45</td>
<td>Make fresh before each experiment; pH 7.4</td>
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<tr>
<td>1,4-Dithiothreitol (DTT)</td>
<td>Sigma Aldrich</td>
<td>646563</td>
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<tr>
<td>Y-27632</td>
<td>Sigma Aldrich</td>
<td>Y0503</td>
<td></td>
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<tr>
<td>Advanced DMEM/F12</td>
<td>Life Technologies</td>
<td>12634-010</td>
<td></td>
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<tr>
<td>N2 Supplement</td>
<td>Life Technologies</td>
<td>17502-048</td>
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<tr>
<td>B-27 Supplement</td>
<td>Life Technologies</td>
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<tr>
<td>HEPES</td>
<td>Life Technologies</td>
<td>15630-106</td>
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<tr>
<td>Glutamax</td>
<td>Life Technologies</td>
<td>35050-061</td>
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<tr>
<td>Penicillin/Streptomycin/ Amphotericin B</td>
<td>Gibco</td>
<td>15240-096</td>
<td>Anti-Anti solution</td>
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<tr>
<td>Recombinant human Wnt-3a</td>
<td>R &amp; D Systems</td>
<td>5036 WN/CF</td>
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<tr>
<td>Recombinant human Rspo1</td>
<td>R &amp; D Systems</td>
<td>4645- RS</td>
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<tr>
<td>Recombinant human Noggin</td>
<td>R &amp; D Systems</td>
<td>6057-Ng</td>
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<tr>
<td>Recombinant human EGF</td>
<td>R &amp; D Systems</td>
<td>236-EG</td>
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<tr>
<td>LY2157299</td>
<td>SelleckChem</td>
<td>52230</td>
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<td>CHIR99021</td>
<td>Cayman Chemical</td>
<td>13122</td>
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<tr>
<td>Human [leu]15-Gastrin 1</td>
<td>Sigma Aldrich</td>
<td>G9145</td>
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<td>SB202190</td>
<td>Sigma Aldrich</td>
<td>57067</td>
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<td>A83-01</td>
<td>Tocris</td>
<td>2939</td>
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<tr>
<td>Nicotinamide</td>
<td>Sigma Aldrich</td>
<td>N0636</td>
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<td>Acetic Acid</td>
<td>Sigma Aldrich</td>
<td>695092</td>
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<tr>
<td>Water, WFI Quality</td>
<td>Corning, Inc.</td>
<td>25-055-CM</td>
<td>Referred to as sterile water (SW); for growth factor stocks</td>
</tr>
<tr>
<td>Bovine Serum Albumin (BSA)</td>
<td>Sigma Aldrich</td>
<td>A2153</td>
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</tr>
<tr>
<td>Matrigel Matrix, GFR</td>
<td>Corning, Inc.</td>
<td>356231</td>
<td>Phenol red free</td>
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<tr>
<td>24 Well Culture Dish</td>
<td>Corning, Inc.</td>
<td>3524</td>
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<tr>
<td>Conical Tube, 50 ml</td>
<td>Corning, Inc.</td>
<td>430828</td>
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<tr>
<td>Scalpel Handle</td>
<td>World Precision Instruments</td>
<td>500236</td>
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<tr>
<td>Carbon Steel Surgical Blade, No. 10</td>
<td>World Precision Instruments</td>
<td>504169</td>
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<tr>
<td>Tissue Forceps</td>
<td>World Precision Instruments</td>
<td>15918</td>
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<tr>
<td>Item Description</td>
<td>Supplier</td>
<td>Part Number</td>
<td>Additional Information</td>
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<tr>
<td>----------------------------------------</td>
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</tr>
<tr>
<td>Debakey Tissue Forceps</td>
<td>World Precision Instruments</td>
<td>501239</td>
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<tr>
<td>Mayo Scissors</td>
<td>World Precision Instruments</td>
<td>501752</td>
<td>Curved or straight</td>
</tr>
<tr>
<td>Metzenbaum Scissors</td>
<td>World Precision Instruments</td>
<td>501739</td>
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<tr>
<td>Mosquito Forceps, Curved</td>
<td>World Precision Instruments</td>
<td>503724-12</td>
<td>Curved or straight (503728-12)</td>
</tr>
<tr>
<td>Hopkins Bulldog Clamp</td>
<td>Stoelting Co.</td>
<td>52120-40P</td>
<td>Straight</td>
</tr>
<tr>
<td>Silk, 2-0</td>
<td>Henry Schein</td>
<td>685S-BUT</td>
<td>Any similar brand is acceptable</td>
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<tr>
<td>Towel Clamps</td>
<td>World Precision Instruments</td>
<td>501700</td>
<td></td>
</tr>
<tr>
<td>Needle Holder</td>
<td>World Precision Instruments</td>
<td>V503382</td>
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<tr>
<td>Wire suture, 20 gauge</td>
<td>Henry Schein</td>
<td>19075</td>
<td>Cut and straighten before use.</td>
</tr>
<tr>
<td>Surgical Towels</td>
<td>Henry Schein</td>
<td>ST1833</td>
<td>Any similar product is acceptable.</td>
</tr>
<tr>
<td>Lactated Ringers Solution</td>
<td>Henry Schein</td>
<td>9851</td>
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</tr>
<tr>
<td>Chlorhex antiseptic scrub (4%)</td>
<td>Henry Schein</td>
<td>VINV-CHMX-SCRB</td>
<td>Any similar brand is acceptable</td>
</tr>
<tr>
<td>Isopropyl Alcohol 70%</td>
<td>Henry Schein</td>
<td>MS071HS</td>
<td>Any similar brand is acceptable</td>
</tr>
<tr>
<td>IV catheter, 22 gauge</td>
<td>Henry Schein</td>
<td>2225PUR</td>
<td>May need 20g or 24 g depending on size of the vein</td>
</tr>
<tr>
<td>Xylazine (100 mg/ml)</td>
<td>Henry Schein</td>
<td>33198</td>
<td></td>
</tr>
<tr>
<td>Ketamine (100 mg/ml)</td>
<td>Henry Schein</td>
<td>11695-6835-1</td>
<td>Controlled medication</td>
</tr>
<tr>
<td>Isoflurane solution</td>
<td>Henry Schein</td>
<td>10015516</td>
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</tr>
<tr>
<td>Pentobarbital (Fatal Plus Euthanasia Solution (390 mg/ml))</td>
<td>Vortech Pharm.</td>
<td></td>
<td>Multiple brands of Pentobarbital Sodium available.</td>
</tr>
<tr>
<td>Heating pad</td>
<td>Gaymar</td>
<td></td>
<td>Tpump Core Warming System; others are available.</td>
</tr>
<tr>
<td>Mindray Datascope Monitor</td>
<td>Mindray North America</td>
<td></td>
<td>Any equivalent piece of monitoring equipment acceptable</td>
</tr>
<tr>
<td>Vaporizer</td>
<td>Vetland Medical</td>
<td></td>
<td>Recommended to use a Circle System w/ Y piece; multiple suppliers available.</td>
</tr>
<tr>
<td>Fluid Pump</td>
<td>Abbott Hospira</td>
<td></td>
<td>Plum A+: Any similar manufacturer is recommended.</td>
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</tbody>
</table>