

Materials List for:

# Optimization of Laser-Capture Microdissection for the Isolation of Enteric Ganglia from Fresh-Frozen Human Tissue

Aaron A. May-Zhang<sup>1</sup>, Karen K Deal<sup>1</sup>, E. Michelle Southard-Smith<sup>1</sup>

<sup>1</sup>Vanderbilt University Medical Center

Correspondence to: E. Michelle Southard-Smith at [michelle.southard-smith@vumc.org](mailto:michelle.southard-smith@vumc.org)

URL: <https://www.jove.com/video/57762>

DOI: [doi:10.3791/57762](https://doi.org/10.3791/57762)

## Materials

| Name  | Company                                | Catalog Number | Comments |
|---|--|----------------|----------|
| 10% Neutral-buffered formalin                     | Sigma                                  | HT501128-4L    |          |
| 2-Methylbutane                                    | Fisher                                 | O3551-4        |          |
| 3-mL syringe                                      | BD                                     | 309628         |          |
| 50-mL conical tubes, polypropylene                | Corning                                | 05-526B        |          |
| Base molds 37x24x5mm, disposable                  | Electron Microscopy Sciences           | 5025511        |          |
| Belzer UW Cold Storage Solution                   | Bridge to Life                         | N.A.           |          |
| CapSure Macro LCM caps                            | Arcturus, ThermoFisher                 | LCM0211        |          |
| Cling Wrap, Press'n Seal                          | Glad                                   | N.A.           |          |
| Cresyl Violet Acetate                             | Acros Organics                         | AC405760025    |          |
| Cutting Board                                     | Electron Microscopy Sciences           | 63308          |          |
| Ethanol, 190-proof                                | Pharmco-AAPER                          | 111000190      |          |
| Ethanol, 200-proof                                | Pharmco-AAPER                          | 111000200      |          |
| Glass Microscope slides                           | Fisher                                 | 12-550-343     |          |
| Gloves, extended cuff                             | Microflex                              | 19010144       |          |
| Gowns, surgical-disposable                        | Kimberly-Clark                         | 19-088-2116    |          |
| Tray, 20 L (large polypropylene sterilizing pan)  | Nalgene                                | 1335920B       |          |
| Kimwipes (large)                                  | Kimberly-Clark                         | 34120          |          |
| Kimwipes (small)                                  | Kimberly-Clark                         | 34133          |          |
| Laser Capture Microdissection System (ArcturusXT) | ThermoFisher                           | N.A.           |          |
| Leica Cryostat Chuck, large, 40 mm                | Southeast Pathology Instrument Service | N.A.           |          |
| Light Microscope                                  | Olympus                                | CX43           |          |
| Microscope objective (20X)                        | Olympus UPlanFI 20X/0.50, ∞/0.17       | N.A.           |          |
| Microscope objective (10X)                        | Olympus UPlanFI 10X/0.25, ∞/-          | N.A.           |          |
| Molecular Sieves                                  | Acros Organics                         | AC197255000    |          |
| Nuclease-free water                               | Ambion                                 | AM9937         |          |
| PicoPure RNA extraction kit                       | Applied Biosystems                     | 12204-01       |          |
| Pellet Pestle                                     | Kimble Kontes                          | 4621973        |          |
| PEN membrane LCM slides                           | Arcturus, ThermoFisher                 | LCM022         |          |
| RNase-free tubes, 1.5 mL                          | Ambion                                 | AM12400        |          |
| RNaseZAP  | Sigma                                  | Sigma-R2020    |          |
| RNA Extraction Kit "A" (PicoPure)                 | Applied Biosystems                     | 12204-01       |          |

|   |                         |           |  |
|---|-------------------------|-----------|--|
| RNA Extraction Kit "B" (RNeasy Micro kit)     | Qiagen                  | 74004     |  |
| RNA Extraction Method "C" (TRIzol)            | Invitrogen              | 15596-026 |  |
| RNA Extraction Kit "D" (RNeasy PLUS Mini kit) | Qiagen                  | 74134     |  |
| Splash Shield, disposable faceshield          | Fisher                  | 17-310    |  |
| Scissors, Surgical, 14.5 cm "sharp-sharp"     | Fine Science Tools      | 14002-14  |  |
| Syringe filter, cellulose acetate (0.2 µm)    | Nalgene                 | 190-2520  |  |
| Tissue Freezing Medium                        | General Data Healthcare | TFM-5     |  |
| Xylenes                                       | Fisher                  | X3P1GAL   |  |