

Materials List for

Camera-based Measurements of Intracellular [Na⁺] in Murine Atrial Myocytes

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jove.com/video/59600

Materials

| Name | Company | Catalog Number | Comments |
|--------------------------------|-------------------------|-----------------------|--|
| 2,3-Butanedione monoxime (BDM) | Sigma-Aldrich | B0753 | |
| 340 Excitation Filter | Chroma | ET40X | 25 mm |
| 380 Excitation Filter | Chroma | ET80X | 25 mm |
| 510 Emission Filter | Chroma | ET510/80m | 25 mm |
| Bovine Serum Albumin (BSA) | Sigma-Aldrich | A7906 | |
| Bubble trap | BD Medical Technologies | 904477 | Custom made from a 5 ml Luer Lok Syringe, which is located in the tubing path from the perfusing solution to the cannula |
| CaCl ₂ solution | Sigma-Aldrich | 21115 | |
| Cannula | BD Medical Technologies | 305167 | Custom made from a 22 G x 1 1/2 inch needle. Cut to 1 inch and sand 1mm distal tip. |
| Cell Chamber | | | Custom machined with an opening that can securely hold a 25 mm glass cover slip and with a cover that has an inlet and an outlet port for perfusion. |
| Circulating Water Bath | VWR | | |
| Collagenase II | Worthington | LS004176 | Specific activity 290 U/g |
| Creatinine | Sigma-Aldrich | C0780 | |
| DG5-plus illuminator | Sutter Instrument | Lambda DG-4/DG-5 Plus | |
| DMSO | Thermo Fischer | BP231 | |
| EGTA | Sigma-Aldrich | E4378 | |
| EMCCD camera | Princeton Instruments | ProEM-HS | |
| Fine Hemostats | Fine Science Tools | 130-20 | |
| Fine Scissors | Fine Science Tools | 14060-10 | |
| Forceps Supergrip | Fine Science Tools | 00632-11 | |
| Glass Cover slips | VWR | 4838089 | 25 mm circle |
| Glucose | Sigma-Aldrich | G7528 | |

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|--|-----------------------|-----------------|--------------------------------|
| Gramicidin D | Sigma-Aldrich | G5002 | |
| HEPES | Sigma-Aldrich | H3375 | |
| Inner silicon Tubing | VWR | | VWRselect brand silicon tubing |
| Inverted microscope | Nikon Instruments | NikonTE 2000 U | |
| Isolation Tools | | | |
| K Gluconate | Sigma-Aldrich | P1847 | |
| KCl | Sigma-Aldrich | P5405 | |
| KH ₂ PO ₄ | Calbiochem | 529568 | |
| Langendorff perfusion apparatus | | | |
| MgCl ₂ ·6H ₂ O * | Sigma-Aldrich | M0250 | |
| MyoPacer Cell Stimulator | IonOptix | | |
| Na Gluconate | Sigma-Aldrich | S2054 | |
| NaCl | Sigma-Aldrich | S9888 | |
| NaH ₂ PO ₄ | Sigma-Aldrich | S9390 | |
| <i>Natural Mouse Laminin</i> | <i>Thermo Fischer</i> | <i>23017015</i> | <i>0.5-2.0 mg/ml</i> |
| Outer tubing | VWR | | |
| Petri dish 35X10 mm | Falcon | 351008 | |
| PowerLoad | Thermo Fischer | P10020 | |
| Protease XXIV | Sigma-Aldrich | P8038 | |
| SBFI-AM | Thermo Fischer | S1264 | |
| Silk suture | Fine Science Tools | 18020-50 | 0.12 mm diameter |
| Small Spring scissors | Fine Science Tools | 15000-03 | |
| Standard Pattern Forceps | Fine Science Tools | 11000-12 | |
| Strophanthidin | Sigma-Aldrich | G5884 | |
| Surgical Scissors Tough Cut | Fine Science Tools | 14054-13 | |
| Suture Tying Forceps | Fine Science Tools | 00272-13 | |
| Taurine | Sigma-Aldrich | T0625 | |
| Trisbase | Sigma-Aldrich | TRIS-RO | |
| Trypsin | Sigma-Aldrich | T0303 | |
| UVFS Reflective 0.1 ND Filter | Thorlabs | NDUV01B | 25 mm |
| UVFS Reflective 0.2 ND Filter | Thorlabs | NDUV02B | 25 mm |
| UVFS Reflective 0.3 ND Filter | Thorlabs | NDUV03B | 25 mm |
| UVFS Reflective 0.5 ND Filter | Thorlabs | NDUV05B | 25 mm |
| UVFS Reflective 1 ND Filter | Thorlabs | NDUV010B | 25 mm |