

Materials List for

Scoring Central Nervous System Inflammation, Demyelination, and Axon Injury in Experimental Autoimmune Encephalomyelitis

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Materials

| Name | Company | Catalog Number | Comments |
|----------------------------------|--------------------------|-----------------|---|
| 10% Neutral Buffered Formalin | Sigma Aldrich | HT501128-4L | Used to fix spinal cord and brain specimens |
| 1000 mL Glass Beaker | Pyrex | 1000 | |
| 15 mL Falcon Tube | Starstedt | 62.554.100 | Fixing and storing spinal cord and brain |
| 250 mL Erlenmeyer Flask | Pyrex | 4980 | |
| 500 mL Glass Beaker | Pyrex | 1003 | |
| 92 mm x 16 mm Petri Dishes | Starstedt | 82-1473-001 | Used in the tissue grossing procedure |
| 95% Ethyl Alcohol | Commercial Alcohols | P016EA95 | Dehydration and rehydration steps |
| ABC Elite Kit | Vector Laboratories | PK6100 | Used for immunohistochemistry labeling |
| Aqua Hold 2 PAP Pen | Cole Parmer | UZ-75955-53 | Used for drawing around tissue sections in Immunohistochemical Staining |
| Avidin/Biotin Blocking Kit | Vector Laboratories | SP-2001 | |
| Biosafety Cabinet | Any | | |
| Biotinylated rabbit anti-rat IgG | Vector Laboratories | BA-4000 | Used for CD45 staining |
| C57BL6/J Mice | Jackson Laboratory | Stock # 664 | These mice were used in experiments shown in paper. |
| Centrifuge | Thermo Fisher Scientific | Sorvall ST Plus | |
| CitriSolv | Fisher Scientific | 04-355-121 | Used for de-waxing. Is an alternative to xylene |
| DAB Kit | Vector Laboratories | SK-4100 | Used for developing in immunohistochemistry |
| ddH2O | - | - | |

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|---|------------------------------|--------------|---|
| Disposable Scalpel | Magna | M92-10 | Used for grossing spinal cord and brain |
| DWK Life Sciences (Wheaton) glass staining dish | Cole Parmer | UZ-48585-60 | Used for histochemical staining and washes |
| DWK Life Sciences (Wheaton) glass staining rack | Cole Parmer | 10061392 | Used for immunohistochemistry and histochemistry |
| Eosin Y | Bioshop | 173772-87-1 | Stains cytoplasm |
| Feather Microtome Blades | Fisher Scientific | 12-634-1C | Used for sectioning paraffin |
| Filter Paper | Whatman | 1001110 | Used to filter the formalin (during grossing) and the luxol fast blue |
| Fine Surgical Scissors | Fine Science Tools | 14160-10 | Used to snip brain and the skull |
| Fumehood | Any | | |
| Gibco DPBS | Fisher Scientific | 14190944 | |
| Glacial Acetic Acid | BioShop | ACE333.4 | Used in the luxol fast blue staining procedure |
| Histoplex Histology Containers | Starplex Scientific | 565-060-26 | Fixing spinal cord and brain |
| Hydrogen Peroxide | Fisher Chemicals | H325-500 | Used to remove endogenous peroxidase in the tissue |
| ImageJ | NIH | | https://imagej.nih.gov/ij/download.html |
| Kimtech Science Kimwipes | Kimberly Clark Professional | 34155 | Used for immunohistochemistry |
| Lens paper | VWR | 52846-001 | Used for trapping spinal cord species in cassette during processing |
| Light microscope | Any | | |
| Lithium carbonate | Sigma Aldrich | 554-13-3 | De-blueing after luxol fast blue staining |
| Luxol blue | Sigma Aldrich | 1328-51-4 | Stains CNS myelin |
| M.O.M Immunodetection Kit | Vector Laboratories | BMK-2202 | Used to stain SMI-32 |
| Methanol | Fisher Chemicals | A454.2 | Used for fixation |
| Mayer's Hematoxylin | Electron Microscopy Sciences | 26381-02 | Stains nuclei |
| Micro-Adson Forceps with Teeth | Fine Science Tools | 11027-12 | Used for reflecting the skull during dissections |
| Microcentrifuge | Eppendorf | Model 5417R | |
| Microvette Capillary Tubes CB 300 Z | Starstedt | 16.440.100 | Used for blood collection |
| Microscope Cover Glass | Fisher Scientific | 12545A | Used for coverslipping |
| Mini Shaker | VWR | 12620-938 | Used for making buffers |
| NF light kit | Quanterix | 103186 | This kit can be used for detection of mouse or human soluble neurofilament in serum |
| Nitrile Gloves | VWR | 76307-462 | Safety |
| Normal Goat Serum | Vector Laboratories | S-1000 | Blocking reagent |
| Normal Rabbit Serum | Vector Laboratories | S-5000 | Blocking reagent |
| OmniSette Tissue Cassettes | Fisher Scientific | M4935FS | Used for embedding spinal cord and brain |
| p1000 Pipette and Tips | various | | |
| p200 Pipette and Tips | various | | |
| Paraffin Embedding station | Leica Biosystems | Model EG1160 | |
| Paraplast Tissue Infiltration/ Embedding Medium | Leica Biosystems | 39601006 | Used for embedding spinal cord and brain |
| Permount Mounting Medium | Fisher Chemicals | SP15-100 | Used for mounting coverslips on slides |
| pH meter | Fisher Scientific | 13636AB315B | Used for pHing buffers |
| Plastic Transfer Pipettes | Fisher Scientific | 13-711-20 | Used for pHing buffers |

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| Potassium Chloride | BioShop | 7447-40-7 | Used for making PBS |
| Potassium Phosphate Monobasic | BioShop | 7778-77-0 | Used for making PBS |
| Pressure Cooker | Nordic Ware | Tender Cooker | |
| Purified rat anti-mouse CD45 | Vector Laboratories | 553076 | Detects leukocytes |
| Reagent grade alcohol 100% | VWR | 89370-084 | Dehydration and rehydration steps |
| Reagent grade alcohol 70% | VWR | 64-17-5 | Dehydration and rehydration steps |
| Rotary Microtome | Leica Biosystems | Model RM2235 | |
| Simoa Machine | Quanterix | HD-X | |
| Slide Scanner | Zeiss | AxioScan.Z1 | |
| SMI-32 mouse IgG1 antibody | Biologend | 801701 | Detects damaged axons |
| Sodium Chloride | BioShop | 7647-14-5 | Used for making PBS |
| Sodium Phosphate Dibasic | Bioshop | 7558-79-4 | Used for making PBS |
| Standard Adson Forceps | Fine Science Tools | 11150-10 | Used for dissection steps |
| Superfrost Plus Microscope slides | Fisher Scientific | 12-550-15 | Used to collect sections |
| Surgical Tough Cuts | Fine Science Tools | 14110-15 | Used to cut through the spine, body wall, and skin |
| Tissue Processor | Leica Biosystems | Model TP1020 | |
| Tri-sodium citrate | Thermo Fisher Scientific | 03-04-6132 | Used for antigen retrieval |
| Tween-20 | BioBasic | 9005-64-5 | Used for washing sections |
| X-P Pierce XP-100 plate seal | Excel Scientific | 12-140 | Used for the sNF-L Assay |
| Xylene | Fisher Chemicals | 1330-20-7 | Used for de-waxing and clearing sections |
| Funnel | Cole Parmer | RK-63100-64 | Used to filter formalin before grossing tissue |
| Stir Plate | Any | | Used to make solutions |
| Oven | Any | | Used to bake tissue sections after cutting |
| Parafilm | Bemis | 13-374-10 | Used to seal LFB staining dish |
| Microwave | Any | | Timing may vary depending on the microwave model |
| Bovine Serum Albumin (BSA) | Sigma Aldrich | 9048-46-8 | Used to make blocking buffer |
| 1.5 mL Microcentrifuge Tubes | Fisher Scientific | 05-408-129 | Used to store mouse serum samples |
| Vortex | Any | | Used to prepare samples for sNF-L assay |
| Waterbath | Any | | Used to warm enzyme substrate for sNF-L assay |