

Materials List for:

# Dissection and Culture of Chick Statoacoustic Ganglion and Spinal Cord Explants in Collagen Gels for Neurite Outgrowth Assays

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URL: <https://www.jove.com/video/3600>

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## Materials

| Name                                                      | Company                           | Catalog Number | Comments                                                               |
|-----------------------------------------------------------|-----------------------------------|----------------|------------------------------------------------------------------------|
| Dissection microscope                                     |                                   |                | We use a Leica M80 stereomicroscope with brightfield base illumination |
| Slide warmer                                              | C.S. E.                           |                | Collagen polymerization                                                |
| Chicken egg incubator                                     |                                   |                |                                                                        |
| 37°C/5% CO <sub>2</sub> humidified cell culture incubator |                                   |                |                                                                        |
| Sylgard® coated petri dish                                |                                   |                |                                                                        |
| 24-well cell culture plate                                | Corning                           | 3526           |                                                                        |
| #5 Dumont forceps                                         | Fine Science Tools                | 11252-30       |                                                                        |
| #55 Dumont forceps                                        | Fine Science Tools                | 11295-51       |                                                                        |
| Stainless steel dissecting pins                           | Fine Science Tools                | 26002-10       | Embryo pinning, fine dissection                                        |
| Moria perforated spoon                                    | Fine Science Tools                | 10370-17       | Embryo harvest/transfer                                                |
| 200 µl wide mouth pipet tips                              | Dot Scientific, Inc.              | 118-96R        | Explant transfer                                                       |
| E4 and E6 chicken eggs                                    |                                   |                |                                                                        |
| Chick Ringer's solution                                   |                                   |                | Embryo harvest                                                         |
| HBSS                                                      | Sigma-Aldrich                     | H8264          | SAG dissection                                                         |
| L15 medium                                                | Sigma-Aldrich                     | L5520          | Spinal cord dissection medium                                          |
| Fetal calf serum                                          | Atlanta Biologicals               | S11150         | Spinal cord dissection medium                                          |
| Vannas Scissors                                           | World Precision Instruments, Inc. | 501778         | Spinal cord dissection                                                 |
| Rat-tail collagen Type I                                  | BD Biosciences                    | 354249         | Explant culture                                                        |
| 10X PBS (Sterile)                                         |                                   |                | To neutralize collagen                                                 |
| 1N NaOH (Sterile)                                         |                                   |                | To neutralize collagen                                                 |
| Distilled water (Sterile)                                 |                                   |                | To neutralize collagen                                                 |
| pH indicator papers (6.0-8.1)                             | Whatman, GE Healthcare            | 2629-990       | To check collagen pH                                                   |
| 15 ml conical tubes                                       | Dot Scientific, Inc.              | 818-PG         |                                                                        |
| 500 µl wide mouth pipet tips                              | Dot Scientific, Inc.              | 119-R100       | To pipet collagen                                                      |
| DMEM/F12 medium                                           | Sigma-Aldrich                     | D8437          | Explant culture medium                                                 |
| ITS+1                                                     | Sigma-Aldrich                     | I2521          | Medium supplement                                                      |
| Penicillin-Streptomycin                                   | Invitrogen                        | 15140-122      | Medium supplement                                                      |
| CNTF (rat)                                                | Sigma-Aldrich                     | C3835          | Medium supplement                                                      |
| NT-3 (human)                                              | Sigma-Aldrich                     | N1905          | Medium supplement                                                      |
| Purified mouse Wnt5a                                      | R&D Systems                       | 645-WN-010     |                                                                        |

|                                                             |                   |           |                                  |
|-------------------------------------------------------------|-------------------|-----------|----------------------------------|
| Affi-gel Blue gel beads                                     | Bio-Rad           | 153-7302  |                                  |
| Paraformaldehyde                                            | Sigma-Aldrich     | P6148     | Fixation                         |
| PBS                                                         |                   |           | Rinses                           |
| Triton X-100                                                | Sigma-Aldrich     | T9284     | Blocking solution                |
| Sodium azide                                                | Sigma-Aldrich     | S8032     | Blocking solution                |
| Calf serum                                                  | Invitrogen        | 16170-078 | Blocking solution                |
| Mouse monoclonal IgG2b anti- $\beta$ Tubulin 1+II antibody  | Sigma-Aldrich     | T8535     | Labels cell bodies and neurites  |
| Alexa fluor 488 goat anti —mouse IgG2 <sub>b</sub> antibody | Invitrogen        | A21141    | Detects $\beta$ Tubulin antibody |
| Teflon micro spatula                                        | VWR international | 57949-033 | Release collagen gels from well  |