NEUROSCIENCES INNOPROFILE™

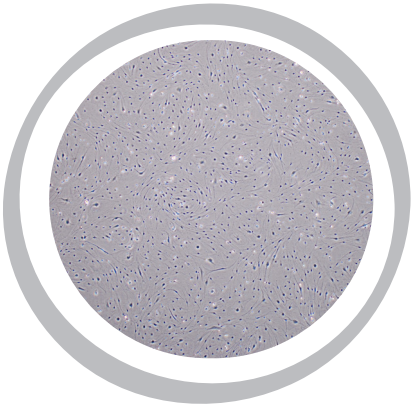
Ref. 10301

SCHWANN CELLS

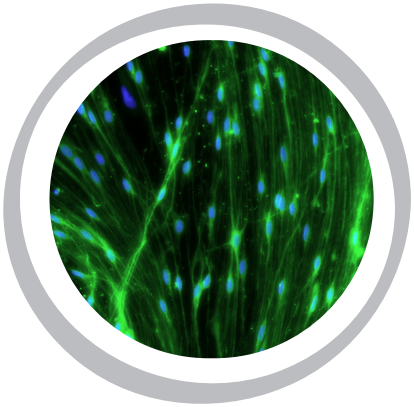
from Sprague/Dawley Rat

Schwann cells are neural crest derivatives that ensheathe and myelinate axons of peripheral nerves. Each Schwann cell wraps around the shaft of an individual peripheral axon, forming myelin sheaths along segments of the axon. Schwann cells play important roles in the development, function, and regeneration of peripheral nerves. When an axon is dying, the Schwann cells surrounding it aid in its digestion, leaving an empty channel formed by successive Schwann cells, through which a new axon may then grow from a severed end. The number of Schwann cells in peripheral nerves is tightly regulated. Their proliferation in vitro can be stimulated by various growth factors including PDGF, FGF, neuregulin, and others.

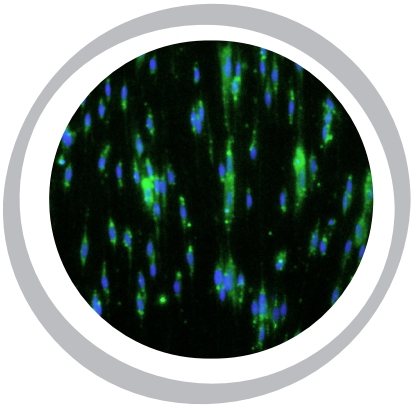
Rat Schwann cells from Innoprot are isolated from Spinal Nerves of P8 rat pups, cryopreserved at secondary cultures and delivered frozen. Each vial contains > 0.5 x 10^6 cells in 0.5 ml volume. Schwann cells are characterized by immunofluorescent method with antibodies to SOX-10, p75NTR and S100β. Schwann cells are guaranteed to further culture in the conditions provided by Innoprot.



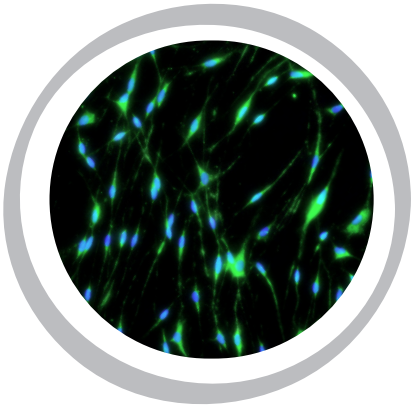
Phase-contrast



p75NTR



SOX-10



S100β

Recommended Medium
Innoprot Schwann Cell Medium (P60123).

Product Characterization
Immunofluorescent method for SOX-10 (Invitrogen #14-5923-82), p75NTR (Invitrogen #MA5-31968) and S100β (Invitrogen #710363). Negative for mycoplasma, bacteria, yeast and fungi.

Product Use
These products are for research use only. Not approved for human or veterinary use, for application to humans or animals, or for use in vitro diagnostic or clinical procedures.
Important: Cryopreserved cells are very delicate. Thaw the vial in a 37°C waterbath and return them to culture as quickly as possible with minimal handling.

Innoprot

NEUROSCIENCES INNOPROFILE™

Unpacking

1. For cryopreserved cells: If there is dry ice in the package and you are not going to culture cells right way, place cryovial(s) immediately into liquid nitrogen. If there is no dry ice left in the package, thaw and culture the cells immediately.

2. For proliferating cells: Spray the culture vessel (flask, plate or slide) with 70% ethanol for disinfection. Transfer the cells into 37°C, 5% CO_2 incubator and allow equilibrating for 2 hours. After cells have equilibrated, remove shipping medium from the culture vessel and replace with fresh medium.

Set up culture after receiving the order:

1. Coat culture vessel with poly-L-lysine. Note: It is important that Schwann cells are plated in poly-L-lysine or poly-L-Ornithine coated culture vessels (coat flask or plate with poly-lysine at 0.1 mg/ml concentration for one hour and wash the flask or plate with sterile water three times).

2. Medium preparation: Decontaminate the external surfaces of medium and medium supplements with 70% ethanol and transfer them to sterile field. Aseptically open each supplement tube and add them to the basal medium with a pipette. Rinse each tube with the medium to recover the entire volume.

3. Set up culture: Prepare one T-25 flask for each cryovial. Prepare the appropriate amount of Schwann medium supplemented with 10% heat-inactivated FBS to facilitate cell adhesion to the plate and allow medium to equilibrate in 37°C, 5% CO_2 incubator for at least 30 min. Note: FBS is added only at the time of plating.

4. Thawing of cells: Place the vial in a 37°C waterbath, hold and rotate the vial gently until the contents are completely thawed. Remove the vial from the waterbath immediately, rinse it with 70% ethanol, wipe it dry and transfer it to a sterile field. Remove the cap, being careful not to touch the interior threads with fingers.

5. Pipet the cell suspension, transfer it into the equilibrated culture medium, mix gently and distribute the appropriate volume to each plate or well. A higher seeding density is recommended (~20,000 cells/cm^2). Return the culture plate to the incubator at 37°C, 5% CO_2.

6. Once the cells are attached to the plate, very carefully change the growth medium to remove the residual DMSO, unattached cells and FBS. The first change of medium can be done between the first 4 and 16 hours after starting the culture. Change medium every other day thereafter. A healthy culture will display elongated morphology and nonvacuole cytoplasm.

Caution: Handling animal derived products is potentially bioharzadous. Although each cell strain testes negative for microbial, diagnostic tests are not necessarily 100% accurate, therefore, proper precautions mush be taken to avoid inadvertent exposure. Always wear gloves and safety glasses when working these materials. Never mouth pipette. We recommend following the universal procedures for handling products of human origin as the minimum precaution against contamination (Grizzle, W. E., and Polt, S. S., 1988. Guidelines to avoid personal contamination by infective agents in research laboratories that use human tissues. J Tissue Culture Methods. 11-4).

INNOVATIVE TECHNOLOGIES IN BIOLOGICAL SYSTEMS, S.L.
Parque Tecnológico Bizkaia, Edifício 502, 1ª Planta | 48160 | Derio | Bizkaia
Tel.: +34 944005355 | Fax: +34 946579925
innoprot@innoprot.com | www.innoprot.com

Innoprot