iPSC-Derived Sensory Neurons Kit (iSN) (Normal, Diseased, Engineered)

Product Description

iPSC-Derived Sensory Neurons (iSNs) provide a physiologically relevant model for studying peripheral nervous system development, sensory function, and neurological disorders. Generated from human induced pluripotent stem cells, iSNs recapitulate key molecular and functional properties of primary sensory neurons, including nociceptors and mechanoreceptors. Each lot is rigorously validated by expression of BRN3A and Peripherin (PRPH), and functionally assessed for responsiveness to sensory stimuli, ensuring reproducibility and high quality.

We are developing a panel of iSNs from iPSCs derived from patients with sensory and peripheral neuropathies, enabling disease-specific modeling and therapeutic research.

iPSC-derived sensory neurons are ideally suited for studying pain mechanisms, neurotoxicity testing, drug screening, peripheral neuropathy modeling, and regenerative medicine applications, providing a scalable and reliable platform for advancing neuroscience and translational research.

Stability and Storage

Upon receipt, immediately transfer the cells from dry ice to liquid nitrogen storage, and maintain them in liquid nitrogen until ready for experimental use.

Shipping

Cryopreserved cells are shipped on dry ice. Live cells are shipped at ambient temperature.

Product Use

The products are for research use only. They are not approved for human or animal use, or for application in in vitro diagnostic procedures.

Contact Us

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Quality Control:

Catalog Number	**ILC-2024**
Organism	*Homo sapiens*
Donor/Tissue/Medical History	See CoA for the detailed information
Product Format	Cryopreserved, or Live Cell Culture
Culture Properties	Adherent
Total Cell Number	1 million cells/vial
Viability	>90%
Human Pathogen	Negative
Bacterial, Fungi, Mycoplasma	Negative
Biomarker Expression	Positive (>30% of PRPH+/BRN3A+/MAP2+)

Representative Dataset:

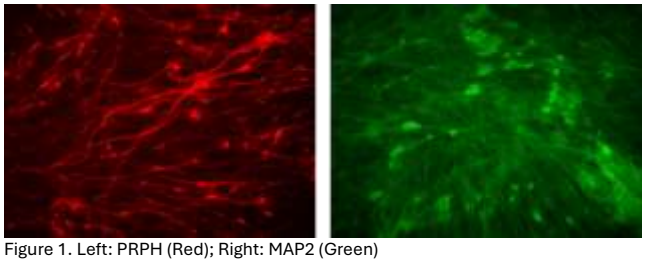

Figure 1. Left: PRPH (Red); Right: MAP2 (Green)

Cell Thawing and Culture Protocol:

1. Thaw the cells rapidly in a 37 °C water bath.
2. Transfer the thawed cells into a 15 mL conical tube.
3. Gently add 2 mL of iSN Culture Media (Cat# ILC0024M) to the tube.
4. Centrifuge at 200 × g for 2 minutes at room temperature.
5. Carefully aspirate the supernatant.
6. Resuspend the cell pellet in 2 mL of iMidbrain Culture Medium.
7. Seed the organoids onto Matrigel coated plates (typically, one vial yields 1 well of a 6-well plate).
8. Gently distribute the cells evenly across the wells.
9. Incubate overnight at 37 °C in a CO_2 incubator.
10. Half change media every 2-3 days.

Related Products:

iSN Culture Medium (Catalog Number: ILC0024M) is specifically formulated to support iPSC-derived Sensory Neuron (iSN) recovery and maturation.