NEUROMICS

Human iPSC – Cortical GABAergic Neurons

Catalog #: IPS005

Cell #: >2x10^6 cells

Storage: Liquid Nitrogen until ready for culture.
While Culturing keep in 37°C CO_2 incubator

Product Format: Frozen Vial

GENERAL INFORMATION

Human iPSC- Cortical GABAergic Neurons are derived from integration-free induced pluripotent stem cell (iPSC) lines. Cells are provided at passage 1.

The nervous system relies on two fundamental interactions between neurons: excitation and inhibition. These processes are mediated by the neurotransmitters glutamate and γ-aminobutyric acid (GABA) for excitatory and inhibitory signals. Dysfunctions in GABAergic neuron activity have been implicated in various neurodevelopmental and neurodegenerative disorders.

Following our protocol, the GABAergic neurons demonstrate high neuronal purity, with over 90% Tuj1 positive cells, and express the characteristic GABA marker associated with multiple neurodevelopmental and neurodegenerative disorders.

Product is for Research use only.

Frozen Vials are shipped in a Dry Ice Package.

HANDLING OF ARRIVING CELLS

1. Check all containers for leakage or breakage.

2. Remove the frozen cells from the dry ice packaging and immediately place the cells at a temperature below-130°C, preferably in liquid nitrogen vapor, until ready for use.

3. To ensure the highest level of viability, thaw the vial and initiate the culture as soon as possible upon receipt. If upon arrival, continued storage of the frozen culture is necessary, it should be stored in liquid nitrogen vapor phase and not at -70°C. Storage at -70°C will result in loss of viability.

PRODUCT TESTING

- Negative for bacteria, yeast, fungi, and mycoplasma

MEDIUM

We recommend customers use our Neuro Coating Solution (cat. HNM009) and Human Cortical Neuron Maturation Medium (cat. HNM007) to culture these cells.

www.neuromics.com

Neuromics Antibodies • 5325 West 74th Street, Suite 8 • Edina, MN 55439
phone 866-350-1500 • fax 612-677-3976 • e-mail pshuster@neuromics.com

PROTOCOL FOR THAWING THE CELLS

Note: If you have any questions or need clarification regarding the protocol for culturing these cells, please reach out to Dr. Jensen Auguste at (978) 608-1766 with your questions before beginning.

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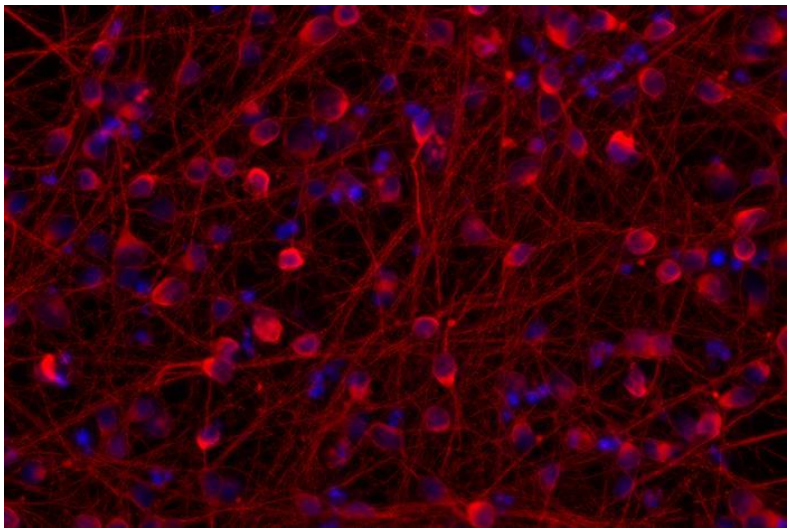
1. Before thawing the cells, prepare the coating vessel by coating the plate with our Neuro Coating Solution**.** The coated plates can be stored at 4°C for a week.

2. Thaw the cells and place the vial in a 37°C water bath with gentle agitation for 1-2 minutes. It's important to keep the cap out of the water to minimize the risk of contamination. Spray the vial with 70% ethanol, wipe the vial, and place it under your biosafety cabinet.

3. Pipette the cells into a 15 mL conical tube with 5 mL of Human Cortical Neuron Maturation Medium. Centrifuge at 200g for 5 minutes at room temperature.

4. After removing the supernatant, re-suspend the cells in the Human Cortical Neuron Maturation Medium.

5. Seed the cells on a pre-coated plate at the desired density. We recommend seeding 10,000-50,000 cells/well depending on the application. Incubate the cells in a 37°C CO2 incubator overnight. Expect to observe some cell debris after the cell recovery process. Perform a half-medium change every 2-3 days to maintain the culture.



CAUTION

Handling human tissue-derived products is potentially bio-hazardous. Although each cell strain is tested negative for HIV, HBV, and HCV DNA, diagnostic tests are not necessarily 100% accurate; therefore, proper precautions must be taken to avoid inadvertent exposure. Always wear gloves and safety glasses when working with these materials. Never mouth pipette. We recommend following the universal procedures for handling products of human origin as the minimum precaution against contamination.

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