

NeuroGro™ Neuronal Basal Medium



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BasalMedia

Cat.No.	Product	Amount	Shelf life	Type	storage	Transportation
T710KJ	NeuroGro™ Neuronal Basal Medium	500 mL	12 Months	Liquid	2 ~ 8 °C	Blue ice

1.Introductions

NeuroGro™ Neuronal Basal Medium can be used to culture antenatal/embryo neuronal cells. B-27 or N-2 Supplement from BasalMedia should be added when using this medium. It is suitable for cultivation of hippocampal neurons, neuronal cells from cerebral cortex and other areas in the brain. Without the addition of astrocyte cell feeding layer, this medium has the ability to maintain short or long term survival of the homologous community of neuronal cells.

NeuroGro™ neuronal basal medium is free of L-glutamine, L-glutamate and L-aspartic acid and must be used with serum free supplement (such as B-27 or N-2 supplement) or serum and 0.5 mM L-glutamine. Or serum and 0.5 mM L-Alanyl-Glutamine solution. Prior to initial plating 25 µM L-glutamate should be added.

The product is prepared using water-for-injection.

This product is only used for scientific research and production, tissue and cell culture in vitro

It is prohibited for clinical use.

2. Quality management system

The product is manufactured in CGMP standard workshop in Basalmedia Shanghai.

Basalmedia Shanghai Biotechnology Co.Ltd has obtained ISO9001 :2015 , ISO13485 :2016 quality system certification.

3.Product parameters

The product is sterilized by filtration.

Appearance: Transparent liquid with red color

Endotoxin: ≤1 EU/mL

Osmotic pressure: 205 ~ 245 mOsm/kg-H₂O

pH value: 7.1 ~ 7.5

storage: 2 ~ 8 °C, protect from light

Transportation: Blue ice

Application: for research and production only.

4.Use guide

Medium prepare

1. Aseptically add 2 mL B-27 supplement(50 X) per 100 mL Neurogro™ Neuronal basal medium, and add L-

glutamine or L-alanyl-glutamine supplement with a final concentration of 0.5 mM; Or aseptically add 1 mL of N-2 supplement (100 X) per 100 mL of Neurogro™ Neuronal basal medium and add L-glutamine or L-alanyl-L-glutamine supplement with a final concentration of 0.5 ~ 2 mM;

2. Prior to initial plating of primary hippocampal neurons, Add 25 µM (3.7 µg/ml) L- glutamate. Some cell lines may require an initial attachment in 2% serum-supplemented to complete Neurogro™ medium;
3. 25 µM β-mercaptoethanol could be added to prolong the survival time of hippocampal neurons;

Note : Once supplemented, the complete Neurogro™ Medium is stable for up to one week when stored in the dark at 2°C to 8°C.

Culture conditions

Media: NeuroGro™ Neuronal Basal Medium.

Culture type: Adherent.

Culture vessels and equipment: Culture plate, flask and CO₂ incubator.

Culture temperature: 36 ~ 38 °C

Incubator atmosphere: umidified atmosphere of 5% CO₂ in air, protect from light.

Set the temperature and air conditions of the cell culture incubator before the experiment.

The following protocol are all taken examples as 6-well culture plates.

Neuron cells culture

The culture of primary neurons is essential in both neurobiology and pharmacology. Scientists favor the use of newly isolated neurons because they retain good functionality, but because of the difficulty in obtaining them, the use of commercial rat primary neurons is more flexible, can be used immediately, and has the same functionality as the newly isolated neurons. However, the acquisition of specific primary neuron cell types is dependent on the operator's optimized experimental scheme.

Cell culture in culture plate

1. Coat at 48-well plate or other culture vessel with Poly-D-Lysine solution (0.05 mg/ mL). When used for the culture of primary neurons, use 0.15 mL/cm² surface area. Keep it at room temperature for 1 hour;
2. Remove the Poly-D-Lysine solution and rinse 2 times with distilled water.(Poly-D-Lysine solution is toxic to cells, rinse thoroughly);
3. Remove distilled water and leave the coated culture vessel uncovered in the laminar hood to dry. Can be used immediately after drying, or can be stored in a dry environment of 4 °C for two weeks;
4. Transfer the cells to culture plate, 90 ~ 320 cells /mm² per 60 ~ 150 µl mixed medium of Neurogro™ and supplement;
5. Culture in the incubator for one hour;
6. Tilt the plate and gently aspirate the medium;
7. Quickly add 0.4 ml/ well of pre-warmed Neurogro™ medium and supplement mixture to the well;
8. Replace the medium for the first time at 3 ~ 4 days after cell plating, and then replace the medium every 3 days, refeed cells by removing one-half of the medium and replacing with an equal volume;

Note: Include glutamate in the medium for plating and subsequent media changes when culturing neuroblastoma cells.

Recover cryopreserved cells:

Primary neuronal cells are extremely fragile upon recovery from cryopreservation, do not centrifuge cells. Primary neuronal cells will adhere to bare plastic and glassware, to maximize cell recovery and yield we recommend pre-rinsing

all plastic and glassware with complete Neurogro™ Neuronal basal medium before use.

Prepare the sterile culture vessels coated with Poly-D-Lysine solution ahead of time;

1. Rapidly thaw (<1 minute) frozen vial of cells in a 37°C water bath. Remove vial from water bath just before the last trace of ice has melted.;
2. Rinse a pipette tip with complete medium and very gently transfer the cells from the cryovial to a prerinsed 15-mL conical tube.;
3. Rinse the cryovial with 1 mL of pre-warmed complete Neurogro™ Neuronal basal medium, and transfer the rinse to the 15-mL tube containing the cells at a rate of one drop per second. Mix by gentle swirling after each drop;
4. Dropwise add 2 mL of complete Neurogro™ Neuronal basal medium to the tube, for a total suspension volume of 4 mL;
5. Determine viable cell density;
6. Plate ~1 × 10⁵ cells per well in Poly-D-Lysine coated 48-well plate or an 8-chambered slide. Bring the cell suspension volume to 500 µL per well by adding complete Neurogro™ Neuronal basal medium;
7. Culture in the incubator;
8. Replace the medium every 3 days, refeed cells by removing one-half of the medium and replacing with an equal volume;

5.Related products

Cat.No	Product	Amount	Storage	Transportation
T720KJ	NeuroGro™ Neuronal Basal Medium-A	500 mL	2 ~ 8 °C	Blue ice
S440J7	B-27 serum-free supplement, 50X	10 mL	-30 ~ -5 °C	Dry ice
S441J7	B-27 serum-free supplement, 50X, no Vitamin A	10 mL	-30 ~ -5 °C	Dry ice
S442J7	B-27 serum-free supplement, 50X, no antioxidants	10 mL	-30 ~ -5 °C	Dry ice
S430J4	N-2 serum-free supplement, 100X	5 mL	-30 ~ -5 °C	Dry ice
S450J7	Insulin-Transferrin-Selenium (ITS-G), 100X	10 mL	2 ~ 8 °C	Blue ice
S451J7	Insulin-Transferrin-Selenium-Sodium Pyruvate (ITS-A), 100X	10 mL	2 ~ 8 °C	Blue ice
S452J7	Insulin-Transferrin-Selenium-Ethanolamine (ITS-X), 100X	10 mL	2 ~ 8 °C	Blue ice
S210JV	L-Glutamine, 200mM	100 mL	-30 ~ -5 °C	Dry ice
S240JV	L-Alanyl-L-Glutamine, 200mM	100 mL	2 ~ 8 °C	Blue ice

* 100X represents the concentration of the product is 100 times of the using concentration.