

SK-N-MC Cells | 300340

General information

Description This cell line has been established by J.L. Biedler in 1971. It has moderate dopamine-beta-hydroxylase activity as well as formaldehyde induced fluorescence indicative of intracellular catecholamines.

Organism Human

Tissue Neuroectodermal

Disease Askin's tumor

Metastatic site Supraorbital region

Synonyms SKNMC, SK-NM-C, SK-NMC

Characteristics

Age 12 years

Gender Female

Ethnicity Caucasian

Morphology Fibroblast-like

Growth properties Adherent

Regulatory Data

Citation SK-N-MC (Cytion catalog number 300340)

Biosafety level 1

NCBI_TaxID 9606

CellosaurusAccession CVCL_0530

Biomolecular Data

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Antigen expression Blood Type O, Rh+

Isoenzymes Me-2, 2, PGM3, 1-2, PGM1, 1, ES-D, 2, AK-1, 1, GLO-1, 1-2, G6PD, B

Tumorigenic Yes, in nude mice and also in hamster cheek

Karyotype Hypodiploidy to pseudodiploidy. Abnormalities including double minutes, breaks, large submetacentric, telocentric and small telocentric markers (originator). (P32) Hypodiploid to hyperdiploid and triploid to hypotetraploid with abnormalities including dicentrics, breaks, double minutes (DM), large subtelocentric and small telocentric chromosomes.

Handling

Culture Medium EMEM (MEM Eagle), w: 2 mM L-Glutamine, w: 2.2 g/L NaHCO₃, w: EBSS (Cytion article number 820100a)

Supplements Supplement the medium with 10% FBS and 1% NEAA

Dissociation Reagent Accutase

Doubling time 32 hours

Subculturing Remove the old medium from the adherent cells and wash them with PBS that lacks calcium and magnesium. For T25 flasks, use 3-5 ml of PBS, and for T75 flasks, use 5-10 ml. Then, cover the cells completely with Accutase, using 1-2 ml for T25 flasks and 2.5 ml for T75 flasks. Let the cells incubate at room temperature for 8-10 minutes to detach them. After incubation, gently mix the cells with 10 ml of medium to resuspend them, then centrifuge at 300xg for 3 minutes. Discard the supernatant, resuspend the cells in fresh medium, and transfer them into new flasks that already contain fresh medium.

Seeding density 1 to 2 x 10⁴ cells/cm²

Fluid renewal 2 to 3 times per week

Post-Thaw Recovery After thawing, plate the cells at 5 x 10⁴ cells/cm² and allow the cells to recover from the freezing process and to adhere for at least 24 hours.

Freeze medium As a cryopreservation medium, we use 50% basal medium + 40% FBS + 10% DMSO, or CM-1 (Cytion catalog number 800100), which includes optimized osmoprotectants and metabolic stabilizers to enhance recovery and reduce cryo-induced stress.

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Thawing and Culturing Cells

1. Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.
2. Upon receipt, either store the cryovial immediately at temperatures below -150°C to ensure the preservation of cellular integrity, or proceed to step 3 if immediate culturing is required.
3. For immediate culturing, swiftly thaw the vial by immersing it in a 37°C water bath with clean water and an antimicrobial agent, agitating gently for 40-60 seconds until a small ice clump remains.
4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
5. Carefully open the disinfected vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of room-temperature culture medium, mixing gently.
6. Centrifuge the mixture at $300 \times g$ for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.
7. Gently resuspend the cell pellet in 10 ml of fresh culture medium. For adherent cells, divide the suspension between two T25 culture flasks; for suspension cultures, transfer all the medium into one T25 flask to promote effective cell interaction and growth.
8. Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.

Incubation Atmosphere

37°C , 5% CO_2 , humidified atmosphere.

Shipping Conditions

Cryopreserved cell lines are shipped on dry ice in validated, insulated packaging with sufficient refrigerant to maintain approximately -78°C throughout transit. On receipt, inspect the container immediately and transfer vials without delay to appropriate storage.

Storage Conditions

For long-term preservation, place vials in vapor-phase liquid nitrogen at about -150 to -196°C . Storage at -80°C is acceptable only as a short interim step before transfer to liquid nitrogen.

Quality Control & Molecular Analysis

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Sterility

Mycoplasma contamination is excluded using both PCR-based assays and luminescence-based mycoplasma detection methods.

To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections.