Product sheet

B16-F10 Cells | 305157

General information

Description	The B16-F10 cell line is a subline of the murine B16 melanoma cell line, derived from a spontaneous skin tumor in a mouse. These cells are characterized by their aggressive metastatic potential, particularly to the lungs, making them a valuable model for studying melanoma progression and metastasis. The B16-F10 cells exhibit high melanin content, which contributes to their pigmentation and is used as a marker in various assays to track cell proliferation and tumor growth. B16-F10 was obtained through a ten-time selective procedure using Fidler's method, enhancing its metastatic capability compared to its parent line, B16-F0, and the B16-F1 subline, which underwent a one-time selective procedure. B16-F10 cells are widely used in cancer research due to their ability to form tumors in syngeneic C57BL/6 mice, providing a consistent and reproducible model for in vivo studies. These cells express various melanoma-associated antigens, which are crucial for investigating immune responses and developing immunotherapies. Additionally, B16-F10 cells are used to evaluate the efficacy of chemotherapeutic agents and the molecular mechanisms underlying drug resistance in melanoma. The cell line's genetic profile and behavior under different experimental conditions offer insights into the pathways involved in melanoma metastasis, aiding in the development of targeted therapeutic strategies. It is noteworthy that B16-F10's derivative, B16-BL6, exhibits even greater invasive activity, making the B16 series a comprehensive model system for studying different aspects of melanoma biology and therapy.
Organism	Mouse
Tissue	Skin
Synonyms	B16/F10, B16 F10, B16F10, B16 melanoma F10

Characteristics

Gender	Male
Morphology	Mixture of spindle-shaped and epithelial-like cells
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	B16-F10 (Cytion catalog number 305157)
Biosafety level	1

Expression / Mutation

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Products	Melanin

Handling

Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 1.5 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
Medium supplements	Supplement the medium with 10% FBS
Passaging solution	Accutase
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.
Split ratio	1:2 to 1:4
Fluid renewal	2 to 3 times per week
Freeze medium	CM-1 (Cytion catalog number 800100)

Handling of cryopreserved cultures

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 x 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.

Quality control / Genetic profile / HLA

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.