Product sheet

FO-1 (MEL-CLS-1) Cells | 300175

Renseignements généraux

Description	The FO-1 cell line, also known as MEL-CLS-1, is a human amelanotic melanoma line derived from a metastatic site, specifically the iliac lymph node of a Caucasian patient. This cell line was established from a xenograft, further ensuring its utility in research focused on metastatic melanoma. Amelanotic melanoma, from which FO-1 originates, is characterized by the absence of melanin pigment, making it particularly valuable for studying melanoma subtypes that lack the typical pigmentation associated with these tumors. The FO-1 cell line exhibits a doubling time of approximately 38 hours, particularly noted at the 49th passage. This relatively fast growth rate makes it suitable for experiments requiring rapid cell proliferation. FO-1 cells are known for their differential sensitivity to various treatments, including their responsiveness to the differentiating and antiproliferative effects of interferon-beta (IFN-β) and 12-O-tetradecanoyl-phorbol-13-acetate (TPA), making them a critical model for studying the modulation of melanoma-associated antigens and HLA antigen expression under various experimental conditions.
Organism	Human
Tissue	Skin
Disease	Amelanotic melanoma
Metastatic site	Iliac lymph node
Synonyms	FO-1, FO #1, FO 1, MEL-CLS-1

Caractéristiques

Age	54 years
Gender	Female
Ethnicity	Caucasian
Growth properties	Adherent

Données réglementaires

Citation	FO-1 (MEL-CLS-1) (Cytion catalog number 300175)
Biosafety level	1

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NCBI_TaxID	9606
CellosaurusAccession	CVCL_5619

Données biomoléculaires

Protein expression	P53(+)
Tumorigenic	Yes, in nude mice
Viruses	Negative for: Sendai, Ectromelia, Polyoma, K-Virus, Kilham, Reo 3, PVM, LCM, M.pulmonis, MVM, Theiler's GD VII, Toolan's H-1, MHV, LDV, RCV/SDA, M-Adenovirus, B.piliformis.
Mutational profile	BRAF V600Emut
Karyotype	Modal number 51, range 38-56

Manipulation

Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 3.7 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
Supplements	Supplement the medium with 10% FBS
Dissociation Reagent	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.
Seeding density	1 x 10^4 cells/cm^2
Fluid renewal	Every 3 days
Post-Thaw Recovery	After thawing, plate the cells at 5 x 10^4 cells/cm^2 and allow the cells to recover from the freezing process and to adhere for at least 24 hours.

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Freeze medium

As a cryopreservation medium, we use complete growth medium (including FBS) + 10% DMSO for adequate post-thaw viability, or CM-1 (Cytion catalog number 800100), which includes optimized osmoprotectants and metabolic stabilizers to enhance recovery and reduce cryo-induced stress.

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 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.

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.

Contrôle de la qualité et analyse moléculaire

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.