Product sheet

MeWo Cells | 300285

General information

Description	The MeWo cell line is a fibroblast-like melanoma cell line isolated from the skin of a 78-year-old White male patient with malignant melanoma. These cells exhibit a characteristic morphology that reflects their fibroblastic origin. MeWo cells are valuable in cancer research, particularly for studying melanoma's biological properties and immune interactions. As with other melanoma cell lines, MeWo cells have been instrumental in the study of tumor antigens and their immunogenicity. Various studies have utilized MeWo cells to identify specific surface antigens, which are crucial in understanding how melanoma cells interact with the immune system. One of the notable properties of MeWo cells is their ability to support the growth of varicella-zoster virus (VZV) isolates, with optimal growth conditions at 32°C, although they can still sustain VZV growth at 36°C. This makes the MeWo cell line particularly useful in virological research, especially in the context of viral replication and pathogenesis studies under varying temperature conditions. Additionally, MeWo cells are tumorigenic, as they can form tumors when injected into nude mice, a property that underscores their utility in in vivo tumorigenicity studies. This characteristic, coupled with their responsiveness to viral infection, highlights MeWo cells as a versatile model for both cancer and infectious disease research. Studies involving the MeWo cell line have also explored the expression of melanoma-associated antigens, where MeWo has been used as a reference cell line in absorption assays to identify unique and common antigens across different melanoma samples. The antigenic profile of MeWo cells, as identified in these studies, includes antigens that are shared with other melanoma cell lines, as well as those that may be unique to this cell line, contributing to the broader understanding of melanoma immunology.
Organism	Human
Tissue	Skin
Disease	Cutaneous melanoma
Metastatic site	Lymph node
Applications	Virus studies
Synonyms	MEWO, Mewo, Me Wo, Me-Wo, Mevo, SK-MEL-MeWo, Mel-MeWo, BI-Mel, EST50

Characteristics

Age	78 years
Gender	Male
Ethnicity	Caucasian

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Morphology	Fibroblast-like
Growth properties	Adherent

Regulatory Data

Citation	MeWo (Cytion catalog number 300285)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_0445

Biomolecular Data

Tumorigenic	Forms malignant melanoma
Products	Melanin
MSI-status	Stable (MSS)
Mutational profile	BRAF V600E wt

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
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.

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Fluid renewal	2 to 3 times per week
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.
Flask Coating	None
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

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.