Product sheet

Colo-38 Cells | 300151

General information

Description	The Colo-38 cell line originates from a malignant melanoma, a type of skin cancer that develops from melanocytes. Established from a metastatic site in the lung, this cell line has been utilized extensively in cancer research, particularly focusing on the biology and treatment of melanoma. Colo-38 cells exhibit an epithelial-like morphology and have been used in studies related to tumor growth, metastasis, and chemotherapy resistance. Research utilizing the Colo-38 cell line has contributed significantly to the understanding of melanoma's aggressive behavior and resistance to conventional therapies. These cells have been instrumental in the evaluation of new pharmacological agents and in the development of targeted therapy approaches. For instance, studies have explored the effects of various chemotherapeutic agents on Colo-38, assessing cellular responses at the molecular level, which includes changes in gene expression and signaling pathways. The insights gained from such studies are crucial for designing more effective treatments for melanoma. Colo-38's relevance in immunotherapy research is also notable. The cell line has been used in the development and testing of melanoma vaccines and in studies exploring the interaction between melanoma cells and the immune system. This has helped in understanding how melanoma cells evade immune surveillance and in strategizing how to enhance the immune response against them. Thus, Colo-38 serves as a valuable model for advancing melanoma research, with implications for therapeutic innovation.
Organism	Human
Tissue	Skin
Disease	Amelanotic melanoma
Synonyms	COLO 38, Colo 38, COLO #38, Colo38, COLO38, Colorado 38

Characteristics

Age	33 years
Gender	Male
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	Colo-38 (Cytion catalog number 300151)
Biosafety level	1

Expression / Mutation

Handling

Culture Medium	RPMI 1640, w: 2.1 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
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.
Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)

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. Optionally, skip centrifugation but remove any remaining freezing medium after 24 hours.
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.