Product sheet

Colo-60H Cells | 300456

General information

Description	The COLO-60H cell line was derived from a biopsy sample taken from an untreated adenocarcinoma in a male patient. Established in 1998, this cell line is of particular interest in cancer research due to its origin in colorectal cancer, a common and often lethal form of cancer that initiates in the lining of the colon or rectum. Adenocarcinomas themselves are characterized by the glandular origin of the tumor cells, which can provide insights into cellular processes such as secretion and absorption that are hijacked during cancer development. COLO-60H cells exhibit the HLA-A*0201 allele, making them a valuable model for immunological studies, particularly in the context of tumor immunology. The presence of this specific Human Leukocyte Antigen (HLA) type is crucial for the presentation of antigens to T cells, influencing the immune system's ability to recognize and destroy cancer cells. This characteristic supports the use of COLO-60H in assessing the efficacy of immunotherapeutic agents and in studying the interactions between tumor cells and the immune system in a histocompatible setting. The relevance of this cell line extends to pharmacological research, where it can be used to evaluate drug responses and explore mechanisms of resistance that are critical in the advancement of personalized medicine for colorectal cancer treatment.
Organism	Human
Tissue	Colon transversum
Disease	Adenocarcinoma
Synonyms	COLO-60H, COLO 60H, COLO60H

Characteristics

Age	73 years
Gender	Male
Morphology	Epithelial-like
Growth properties	Adherent

Regulatory Data

Citation	COLO-60H (Cytion catalog number 300456)
Biosafety level	1

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NCBI_TaxID	9606
CellosaurusAccession	CVCL_4572

Biomolecular Data

Handling

Culture Medium	DMEM:Ham's F12 (1:1), w: 3.1 g/L Glucose, w: 2.5 mM L-Glutamine, w: 15 mM HEPES, w: 0.5 mM Sodium pyruvate, w: 1.2 g/L NaHCO3 (Cytion article number 820400a)
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 is recommended
Fluid renewal	Every 3 to 5 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.
Freeze medium	As a cryopreservation medium, 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.

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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 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.

Quality control / Genetic profile / HLA

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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.