Product sheet

CT26 Cells | 305229

General information

Description	CT26 is a widely utilized murine colon carcinoma cell line derived from BALB/c mice. These cells are characterized by their epithelial-like morphology and have been extensively used in cancer research, particularly in studies focusing on tumor immunology and the development of cancer therapies. The CT26 cell line is valuable due to its high tumorigenic potential and ability to form tumors when implanted in syngeneic mice, making it an excellent model for investigating the mechanisms of tumor growth and metastasis in a controlled environment. Research involving CT26 cells has provided critical insights into the immune system's response to tumors, aiding in the development of novel immunotherapeutic approaches. These cells are often used in conjunction with immunomodulatory agents to assess the efficacy of potential treatments and to study the interactions between cancer cells and the immune system. The CT26 cell line's compatibility with various genetic manipulation techniques further enhances its utility in exploring the molecular underpinnings of cancer and testing new therapeutic strategies. Overall, the CT26 cell line is a cornerstone in preclinical cancer research, contributing to the understanding of colorectal cancer biology and the advancement of therapeutic interventions. Its relevance in immunotherapy studies underscores its importance in the ongoing efforts to develop effective cancer treatments. Due to its robust nature and well-documented characteristics, CT26 continues to be a preferred model in oncology research.
Organism	Mouse
Tissue	Colon
Disease	Adenocarcinoma
Synonyms	CT-26, CT 26, Colon Tumor 26

Characteristics

Breed/Subspecies	BALB/c
Age	Unspecified
Gender	Female
Growth properties	Adherent

Regulatory Data

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Citation	CT26 (Cytion catalog number 305229)
Biosafety level	1
NCBI_TaxID	10090
CellosaurusAccession	CVCL_7254

Biomolecular Data

Tumorigenic	Yes, in BALB/c mice

Handling

Culture Medium	RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
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.
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.

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.