Product sheet

8305C Cells | 305101

General information

Description	The 8305C cell line is a human thyroid carcinoma cell line derived from an undifferentiated anaplastic carcinoma of the thyroid. These cells are characterized by their aggressive growth behavior and poor differentiation, which are hallmarks of anaplastic thyroid carcinomas. This cell line retains several key features that are relevant to the study of thyroid cancer pathophysiology, including alterations in gene expression profiles and signaling pathways that are pivotal in thyroid carcinogenesis. Studies utilizing the 8305C cell line have demonstrated its utility in exploring the molecular mechanisms underlying thyroid cancer progression, resistance to therapy, and metastasis. Specifically, this cell line has been used to investigate the efficacy of various chemotherapeutic agents and targeted therapies, making it a valuable model for preclinical drug testing. Additionally, 8305C has been employed in research focusing on the role of genetic and epigenetic modifications in thyroid cancer, offering insights into potential therapeutic targets and biomarkers for this aggressive cancer type. Due to its derivation from a high-grade malignancy, the 8305C cell line serves as an important tool in thyroid cancer research, particularly in studies aimed at understanding the aggressive behavior of anaplastic thyroid carcinoma and developing strategies for its effective treatment.
Organism	Human
Tissue	Thyroid
Disease	Thyroid gland anaplastic carcinoma
Synonyms	8305c, 8305-C, 8305C_1

Characteristics

Age	67 years
Gender	Female
Ethnicity	Asian
Morphology	Epithelial
Growth properties	Adherent

Regulatory Data

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Citation	8305C (Cytion catalog number 305101)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1053

Biomolecular Data

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
Dissociation Reagent	Accutase
Doubling time	54 hours
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.
Fluid renewal	2 to 3 times per week
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.

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

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.