Product sheet

BT-483 Cells | 305247

General information

Description	The BT-483 cell line is derived from a human breast carcinoma. Specifically, these cells were established from a primary tumor of an adult female patient with breast cancer. BT-483 cells are characterized by their epithelial morphology and are adherent in culture, forming monolayers. This cell line is estrogen receptor-positive (ER+), making it particularly valuable for studying hormone-responsive breast cancers and the role of estrogen in breast cancer progression Researchers use BT-483 cells to investigate various aspects of breast cancer biology, including hormone receptor signaling, gene expression profiles, and the cellular responses to different hormonal therapies. These cells are essential for testing the efficacy of anti-estrogen drugs, such as tamoxifen and aromatase inhibitors, which are commonly used in the treatment of ER+ breast cancers. Additionally, BT-483 cells provide a useful model for studying the mechanisms of drug resistance, tumor growth, and metastasis in hormone-responsive breast cancer. The BT-483 cell line also serves as a tool for high-throughput screening of new therapeutic agents and for understanding the molecular basis of breast cancer heterogeneity. By comparing the responses of BT-483 cells to various treatments with other breast cancer cell lines, researchers can identify specific vulnerabilities and potential targets for therapy, ultimately contributing to the development of more effective and personalized treatments for breast cancer patients.
Organism	Human
Tissue	Breast
Disease	Invasive breast carcinoma of no special type
Synonyms	BT483

Characteristics

Age	23 years
Gender	Female
Ethnicity	European
Morphology	Epithelial
Cell type	Epithelial cell
Growth properties	Adherent

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Regulatory Data

Citation	BT-483 (Cytion catalog number 305247)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_2319

Biomolecular Data

Tumorigenic	Yes, in Amsterdam/IMR rats; Yes, in nude mice; Yes, in soft agar
Mutational profile	Mutation: PIK3CA, p.Glu542Lys (c.1624G>A); Mutation: TP53 p.Met246Ile (c.738G>A)

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	TrypLE Express
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 to 3 x 10^4 cells/cm^2
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.
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

BT-483 Cells | 305247

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.