Product sheet

AN3 Ca Cells | 300119

General information

Description	The An3 Ca cell line is derived from a human endometrial adenocarcinoma, a type of cancer originating from the lining of the uterus. This cell line is estrogen receptor negative (ER-) and exhibits aggressive tumorigenic potential when assessed in vivo. An3 Ca cells are used extensively in research focused on understanding the molecular and cellular mechanisms underlying endometrial cancer progression, including studies on cancer cell proliferation, metastasis, and response to therapeutic agents. Characteristically, An3 Ca cells display an epithelial morphology and have been utilized to study the impact of various genetic and environmental factors on cancer cell behavior. Research using this cell line has contributed to identifying potential therapeutic targets and understanding the resistance mechanisms against conventional treatments. They serve as a valuable model for evaluating new drugs or treatment strategies that could be effective against aggressive forms of endometrial cancer. Overall, the An3 Ca cell line is instrumental in advancing the scientific knowledge of endometrial adenocarcinoma, offering insights that might lead to more effective interventions for this challenging and often lethal disease.
Organism	Human
Tissue	Uterus, Endometrium
Disease	Adenocarcinoma
Synonyms	AN3_CA, AN3-CA, AN3 Ca, AN3CA, AN-3, AN3, Acanthosis Nigricans 3rd attempt-CArcinoma

Characteristics

Age	55 years
Gender	Female
Ethnicity	Caucasian
Morphology	Epithelial-like
Cell type	Epithelial
Growth properties	Adherent

Regulatory Data

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Citation	AN3 Ca (Cytion catalog number 300119)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_0028

Biomolecular Data

Isoenzymes	PGM3, 1-2, PGM1, 1, ES-D, 1, AK-1, 1-2, GLO-1, 2, G6PD, B,
Tumorigenic	Yes, in nude mice. Produces undifferentiated malignant tumor, also at low frequency (22%) in the cheek pouch of cortisone treated hamsters
Ploidy status	Aneuploid, Phenotype Frequency Product: 0.0054

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 and 1% NEAA
Dissociation Reagent	Accutase
Doubling time	45 to 50 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.
Seeding density	An initial seeding density of 3 to 4 x 10^4 cells/cm^2 is recommended. Later on, 2 x 10^4 cells/ cm^2 will yield a confluent layer in 4 to 5 days.
Fluid renewal	2 to 3 times per week

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Post-Thaw Recovery	Within 24 to 48 hours
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.
Flask Coating	None
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.