AN3 Ca

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.

Tissue	Uterus, Endometrium
Disease	Adenocarcinoma

Synonyms

- AN3_CA
- AN3-CA
- AN3 Ca
- AN3CA
- AN-3
- AN3
- Acanthosis Nigricans 3rd attempt-CArcinoma

CLASSIFICATION

Organism	Human
Sex	Female
Growth properties	Adherent
Biosafety level	1

CHARACTERISTICS

Morphology	Epithelial-like
Cell type	Epithelial
Tumourigenic	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
Doubling time	45 to 50 hours

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IDENTIFIERS

Citation

AN3 Ca (Cytion catalog number 300119)

NCBI TaxID	9606
Cellosaurus	CVCL_0028

EXPRESSION AND SUSCEPTIBILITY

Isoenzymes

PGM3, 1-2, PGM1, 1, ES-D, 1, AK-1, 1-2, GLO-1, 2, G6PD, B,

HANDLING AND CULTURE

Culture medium

EMEM (MEM Eagle), w: 2 mM L-Glutamine, w: 2.2 g/L NaHCO3, w: EBSS (Cytion article number 820100a)

Incubation atmosphere	37°C, 5% CO_2, humidified atmosphere.

Supplements

Supplement the medium with 10% FBS and 1% NEAA

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	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
Post-thaw recovery	Within 24 to 48 hours

Thawing and culturing

Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit. 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.
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.
Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
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.
Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.
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.
Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.

QUALITY CONTROL AND CRYOPRESERVATION

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.

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.

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.

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.

DONOR

Donor age	55 years
Ethnicity	Caucasian

LEGAL AND SAFETY

Safety precautions

When planning to store a cryovial in liquid nitrogen for future thawing, it is mandatory to adhere to stringent safety measures. Appropriate protective gloves and clothing are essential, and the use of a face mask or safety goggles is required during the transfer of frozen samples to or from the liquid nitrogen tank. This is to mitigate the risk of injury from potential cryovial explosions upon removal, which can result in the projection of sharp fragments.

Warranty

At Cytion, we stand behind the quality and viability of our products.
We guarantee that our cells will be viable at the start of culture for
60 days after shipment from our facilities.
We assure that all materials conform to the specifications described in the
Certificate of Analysis and/or Product Sheet.
For full details, please refer to our
Warranty Statement.

Material Transfer Agreement required	Yes