SW626

305881

GENERAL INFORMATION

Description

SW626 is a human ovarian cancer cell line established from an adult patient with serous cystadenocarcinoma of the ovary. It has been widely utilized as a model for epithelial ovarian cancer (EOC), particularly for studying tumor biology, drug response, and molecular heterogeneity in high-grade serous carcinoma. Histologically, the SW626 cell line retains characteristics consistent with its serous adenocarcinoma origin and exhibits tumorigenic potential when xenografted into immunocompromised mice, producing solid tumors that recapitulate features of the primary neoplasm.
Genomic profiling of SW626 reveals common alterations frequently observed in ovarian cancers, including disruptions in key regulatory pathways such as TP53 and PI3K/AKT. Molecular analyses have shown that SW626 carries chromosomal aberrations and gene expression patterns representative of high-grade serous ovarian cancer, making it a relevant model for investigating oncogenic signaling, therapeutic vulnerabilities, and resistance mechanisms. The cell line has been included in large-scale cancer genomics projects, where it contributes to drug screening platforms and comparative studies with other ovarian cancer models, helping to define molecular subtypes and inform precision oncology approaches.

Tissue	Metastatic
Disease	Colon adenocarcinoma

Synonyms

- SW-626
- SW 626

CLASSIFICATION

Organism	Human
Sex	Female
Growth properties	Adherent
Biosafety level	1

CHARACTERISTICS

Cell type	Epithelial
Tumourigenic	Yes; Yes, in nude mice produces well differentiated papillary adenocarcinomas consistent with ovarian primary

Karyotype

Hypertetraploid; modal number = 104. The rate of higher ploidies was 23%. The markers der(2)t(2;5)(q35;q31); del(8)(q13q22); del(12)(q13); t(q9q13) and two others were common to most cells. Generally there were two copies of der(2) and three copies of del(8) per cell. The t(3;11)(p21;q25) and i(15q) markers were seen in some cells. Many cells had 8 copies of N3, N7, N9, N19 and N20, but only two copies of N2. Normal 8 was absent. There were four copies of X, and Y was not found.

IDENTIFIERS

Citation

SW626 (Cytion catalog number 305881)

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NCBI TaxID	9606
Cellosaurus	CVCL_1725

EXPRESSION AND SUSCEPTIBILITY

Isoenzymes

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

Mutational profile

Mutation: APC, Simple, p.Arg976fs*9 (c.2926_2927insA), Homozygous, KRAS, Simple, p.Gly12Val (c.35G>T), Heterozygous, Simple, p.Asp351His (c.1051G>C), Homozygous, TP53, Simple, p.Gly262Val (c.785G>T), Homozygous

HANDLING AND CULTURE

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)

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

Supplements

Supplement the medium with 10% FBS

Dissociation reagent	Accutase
Fluid renewal	2 to 3 times per week

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	46 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.

Disclaimer

Our cells are provided for in vitro laboratory research purposes exclusively and are not intended for clinical or diagnostic use, nor are they to be administered to humans or used for veterinary purposes. Users must adhere to all applicable guidelines and regulations for the handling and use of these cells in a research setting.

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