

SW527 Cells | 300640

General information

Description

The SW527 cell line is a human breast carcinoma cell line derived from a Caucasian adult patient. It was established in the early 1970s and has been included in foundational studies characterizing tumorigenicity in immunodeficient models. In one such study, SW527 successfully formed tumors in nude mice following subcutaneous inoculation of 6×10^6 cells, supporting its malignant origin. Histopathological analysis of the resulting tumors showed features consistent with the original human carcinoma, confirming its relevance as a breast cancer model.

SW527 has been authenticated as a tumor-derived line of G6PD type B, a classification that helps exclude contamination with HeLa cells, which is a critical concern in historical cell line collections. Despite this, comprehensive molecular or immunological profiling of SW527 appears limited in recent large-scale datasets.

Overall, SW527 remains a validated breast carcinoma model, primarily supported by in vivo tumorigenicity data. Additional molecular profiling would be beneficial to broaden its utility in mechanistic or drug discovery research.

Organism

Human

Tissue

Breast; Mammary gland

Disease

Breast adenocarcinoma

Synonyms

SW-527, SW 527

Characteristics

Age

70 years

Gender

Female

Ethnicity

Caucasian

Morphology

Epithelial

Cell type

Epithelial

Growth properties

Adherent

Regulatory Data

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Citation	SW527 (Cytion catalog number 300640)
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Biosafety level	1
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NCBI_TaxID	9606
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CellosaurusAccession	CVCL_3799
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Biomolecular Data

Mutational profile	Mutation: p.Gln1338Ter, Homozygous; Mutation: p.Gly12Val, Homozygous; Mutation: p.Arg273His, Heterozygous; Mutation: p.Pro309Ser, Heterozygous
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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 NaHCO ₃ (Cytion article number 820400a)
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Supplements	Supplement the medium with 10% FBS
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Dissociation Reagent	Accutase
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Freeze medium	As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability.
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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 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium.
7. Follow the procedure described under Post-Thaw Recovery

Incubation Atmosphere

37°C, 5% CO₂, 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