HCC1806

300467

GENERAL INFORMATION

Description

The HCC1806 cell line is derived from the mammary gland of a 60-year-old patient with acantholytic squamous cell carcinoma. These cells lack receptors for estrogen and progesterone, and the absence of epidermal growth factor receptor (EGFR) amplification, categorize it as a triple-negative breast cancer. The cell line is instrumental for the biological validation of therapeutic targets, as it closely mirrors the behavior of TNBC in vivo, including tendencies for spontaneous metastasis and resistance to conventional therapies like paclitaxel.
Molecular effects of interventions, such as AEB071 treatment, on HCC1806 cells, provide insights into the cell proliferation pathways and the potential of protein kinase inhibitors as therapeutic agents. The use of HCC1806 in xenograft models contributes to the study of tumor growth and metastasis in a controlled environment.
HCC1806 breast cancer cells serve as a valuable tool for the study of breast cancer, particularly within the context of triple-negative subtypes. It stands as a critical resource for researchers looking to unravel the molecular interactions in breast cancer and search for effective treatments against this challenging variant of the disease.

Tissue	Breast, mammary gland
Disease	Breast squamous cell carcinoma, acantholytic variant

Applications

3D cell culture, Cancer research

Synonyms

- Hcc1806
- HCC-1806
- Hamon Cancer Center 1806

CLASSIFICATION

Organism	Human
Sex	Female
Growth properties	Adherent
Biosafety level	1

CHARACTERISTICS

Morphology	Epithelial
Cell type	Epithelial cell

Karyotype

Number of cells examined = 59. Modal Chromosome Number = 75 with a range of 65 to 79. Polyploidy Rate = 22%

IDENTIFIERS

Citation

HCC1806 (Cytion catalog number 300467)

NCBI TaxID	9606

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Cellosaurus	CVCL_1258

EXPRESSION AND SUSCEPTIBILITY

Receptors expressed

Estrogen receptor, negative, progesterone receptor, negative

Protein expression

Epithelial glycoprotein 2 (EGP2), cytokeratin 19

Oncogenes

Her2/neu-, p53-

HANDLING AND CULTURE

Culture medium

RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)

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

Supplements

Supplement the medium with 10% FBS

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.

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	60 years
Ethnicity	African

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