Product sheet

HCC1806 Cells | 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.
Organism	Human
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

Characteristics

Age	60 years
Gender	Female
Ethnicity	African
Morphology	Epithelial
Cell type	Epithelial cell
Growth properties	Adherent

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Regulatory Data

Citation	HCC1806 (Cytion catalog number 300467)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1258

Biomolecular Data

Receptors expressed	Estrogen receptor, negative, progesterone receptor, negative
Protein expression	Epithelial glycoprotein 2 (EGP2), cytokeratin 19
Oncogenes	Her2/neu-, p53-
Karyotype	Number of cells examined = 59. Modal Chromosome Number = 75 with a range of 65 to 79. Polyploidy Rate = 22%

Handling

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

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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 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

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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.