Product sheet

HCC1395 Cells | 305546

General information

Description	The HCC1395 cell line is a model derived from a human basal-like breast cancer, a subtype often associated with triple-negative breast cancer (TNBC). This cell line is known for its high genetic complexity, which includes significant genomic instability and a notable mutation profile typical of aggressive breast cancers. Studies focusing on HCC1395 have identified a considerable number of somatic mutations and copy number variations, contributing to its classification as a representative model for TNBC research. HCC1395 is especially relevant for exploring mechanisms underlying drug resistance and metastasis in basal-like breast cancers. One study highlighted the use of this cell line to evaluate the impact of silencing genes associated with cell migration, such as ZEB2, revealing that its downregulation could reduce the invasive potential of HCC1395. Additionally, this cell line's mutation landscape often includes alterations in genes related to DNA damage response and cell cycle regulation, such as TP53, which is frequently mutated in basal-like breast cancers. These characteristics make HCC1395 an important tool for preclinical studies that investigate new therapeutic strategies, including targeted and combination therapies aimed at overcoming resistance. By incorporating high-throughput sequencing and functional genomics approaches, researchers use HCC1395 to better understand TNBC pathophysiology, contributing to the development of more effective treatment regimens.
Organism	Human
Tissue	Breast
Disease	Carcinoma
Synonyms	HCC-1395, SCC-1395, Hamon Cancer Center 1395

Characteristics

Age	43 years
Gender	Female
Ethnicity	Caucasian
Morphology	Epithelial-like
Cell type	Epithelial cell
Growth properties	Adherent

HCC1395 Cells | 305546

Regulatory Data

Citation	HCC1395 (Cytion catalog number 305546)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1249

Biomolecular Data

Protein expression	Epithelial glycoprotein 2 (EGP2), cytokeratin 19
Oncogenes	Her2/neu-, p53+
Mutational profile	Mutation: TP53, p.Arg175His (c.524G>A), homozygous

Handling

Culture Medium	RPMI 1640, w: 4.5 g/L Glucose, w: 2 mM L-Glutamine, w: 10 mM HEPES, w: 1 mM Sodium pyruvate, w: 1.5 g/L NaHCO3 (820702a)
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 TrypLE Express, 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.
Fluid renewal	2 to 3 times per week
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.

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.
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

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.