JHH-7

305386

GENERAL INFORMATION

Description

JHH-7 is a human hepatocellular carcinoma (HCC) cell line established from a primary HCC of a 53-year-old Japanese male patient, also designated FLC-7 (Functional Liver Cell-7). The line harbors a TP53 p.Arg267Pro mutation (unspecified zygosity), which affects the DNA-binding domain of p53 and impairs its tumor suppressor function. JHH-7 is one of several JHH-series HCC lines derived from Japanese patients at Jikei University, providing a well-characterized panel of HCC models with different TP53 mutational backgrounds and metabolic profiles.
JHH-7 is applicable in hepatocellular carcinoma research, including studies of HCC metabolism, hepatocyte differentiation markers, TP53 mutant tumor phenotype, drug sensitivity and resistance to sorafenib, lenvatinib, and other systemic HCC therapies, and comparative analyses within the JHH-series HCC panel. Its retained expression of liver-specific functions (albumin, AFP) makes it a relevant model for studying differentiated HCC biology. It is also applicable in xenograft studies.

Tissue	Liver
Disease	Adult hepatocellular carcinoma
Metastatic site	Primary liver tumor

Applications

Hepatocellular carcinoma research; HCC metabolism; TP53-mutant HCC biology; drug sensitivity (sorafenib, lenvatinib); JHH-series comparative studies; liver cancer drug evaluation; xenograft models

Synonyms

- Jhh-7
- JHH7
- FLC-7
- FLC7
- Functional Liver Cell-7

CLASSIFICATION

Organism	Human
Sex	Male
Growth properties	Adherent
Biosafety level	1

CHARACTERISTICS

Morphology	Epithelial-like
Cell type	Hepatocyte-like
Doubling time	26.4 hours ; 17.1 hours ; 30 hours , ~29 hours , ~26 hours

IDENTIFIERS

Citation

JHH-7 (Cytion catalog number 305386)

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NCBI TaxID	9606
Cellosaurus	CVCL_2805

EXPRESSION AND SUSCEPTIBILITY

Mutational profile

Mutation: p.Arg267Pro, Unspecified

HANDLING AND CULTURE

Culture medium

Williams' E medium or MEM + 10% FBS (verify from product CoA)

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

Supplements

Supplement the medium with 10% FBS

Dissociation reagent	0.25% Trypsin-EDTA or Accutase

Subculturing

Remove medium, wash with PBS without calcium and magnesium, cover with 0.25% Trypsin-EDTA or Accutase, incubate 5–8 min at RT, resuspend in medium, centrifuge 300×g 3 min, discard supernatant, reseed in fresh medium.

Split ratio	1 to 5
Seeding density	1 to 3 × 10^4 cells/cm^2
Fluid renewal	Every 2 to 3 days

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 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium.
Follow the procedure described under Post-Thaw Recovery

QUALITY CONTROL AND CRYOPRESERVATION

Freeze medium	As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability.

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	53 years

Ethnicity	Japanese

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