Product sheet

H22 Cells | 305163

General information

Description	The H22 cell line is a murine hepatocellular carcinoma cell line derived from liver tumor cells. These cells are commonly used in cancer research to study liver cancer mechanisms, therapeutic interventions, and drug efficacy. H22 cells exhibit typical characteristics of hepatocellular carcinoma, including rapid proliferation, resistance to apoptosis, and the ability to form tumors when injected into suitable animal models. This makes them a valuable tool for in vivo studies aiming to understand tumor growth, metastasis, and the tumor microenvironment in liver cancer. One of the significant advantages of the H22 cell line is its use in immunotherapy research. Since the cells are derived from a murine model, they are particularly useful for studying the interactions between cancer cells and the immune system in a controlled environment. Researchers utilize H22 cells to evaluate the efficacy of various immunotherapeutic agents, including checkpoint inhibitors and cancer vaccines. Additionally, H22 cells are employed in the investigation of liver-specific metabolic pathways and the role of genetic mutations in hepatocellular carcinoma progression. Overall, the H22 cell line serves as a robust model for hepatocellular carcinoma, providing insights into cancer biology and aiding in the development of novel therapeutic strategies. Its relevance to both in vitro and in vivo studies underscores its importance in the field of cancer research.
Organism	Mouse
Tissue	Liver
Disease	Hepatocellular carcinoma
Synonyms	Hepatoma-22, Hepatoma 22

Characteristics

Morphology	Lymphoblast
Growth properties	Suspension

Identifiers / Biosafety / Citation

Citation	H22 (Cytion catalog number 305163)
Biosafety level	1

Expression / Mutation

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Handling

Culture Medium	RPMI 1640, w: 2.1 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Medium supplements	Supplement the medium with 10% FBS
Subculturing	Gently homogenize the cell suspension in the flask by pipetting up and down, then take a representative sample to determine the cell density per ml. Dilute the suspension to achieve a cell concentration of 1 x 10^5 cells/ml with fresh culture medium, and aliquot the adjusted suspension into new flasks for further cultivation.
Split ratio	1:2 to 1:4
Fluid renewal	2 to 3 times per week
Freeze medium	CM-1 (Cytion catalog number 800100)

Handling of cryopreserved cultures

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.

Quality control / Genetic profile / HLA

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.