AH-130 FN

500451

GENERAL INFORMATION

Description

AH-130 FN is a variant of the AH-130 rat ascites tumor cell line, used extensively in studies related to coagulation, fibrinolysis, and metastasis. These cells were derived from rats and are typically maintained by serial intraperitoneal implantation in male Donryu rats. The AH-130 line itself is known for its high thromboplastic and fibrinolytic activities, which are linked to its role in promoting blood-borne metastasis, especially in the lungs. In contrast, the AH-130 FN variant has lower thromboplastic and fibrinolytic activity. This difference in enzymatic activity between AH-130 and AH-130 FN is crucial as it influences the formation of thrombi and the number of metastatic foci in the lungs following intravenous inoculation.
Research has shown that after intravenous injection, AH-130 cells cause a significant reduction in platelet count and fibrinogen levels, indicative of increased thrombus formation. This effect is notably more pronounced than in AH-130 FN. Histological studies demonstrate that AH-130 forms more abundant metastatic foci in the lungs compared to AH-130 FN, both at 72 hours and 7 days post-inoculation. AH-130 is associated with the formation of thrombi composed of platelets and fibrin around embolized tumor cells, whereas AH-130 FN shows sparse thrombus formation. These findings suggest that AH-130's higher thromboplastic activity plays a significant role in promoting metastasis through platelet aggregation and fibrin deposition around the tumor cells, a process less prominent in AH-130 FN.

Tissue	Liver
Disease	Hepatocellular carcinoma

Synonyms

- AH130FN-TC
- AH130FN
- AH-130F(N)
- AH-130FN
- AH 130 FN

CLASSIFICATION

Organism	Rat
Growth properties	Adherent and suspension
Biosafety level	1

CHARACTERISTICS

Morphology	Round cells in suspension, Epithelial-like when adherent
Tumourigenic	Yes, in Wistar rats.

IDENTIFIERS

Citation

AH-130 FN (Cytion catalog number 500451)

NCBI TaxID	10116
Cellosaurus	CVCL_5683

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EXPRESSION AND SUSCEPTIBILITY

Viruses

RAP-test negative. .

HANDLING AND CULTURE

Culture medium

DMEM:Ham's F12 (1:1), w: 3.1 g/L Glucose, w: 2.5 mM L-Glutamine, w: 15 mM HEPES, w: 0.5 mM Sodium pyruvate, w: 1.2 g/L NaHCO3 (Cytion article number 820400a)

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

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.

Seeding density	1 x 10^6 cells/cm^2
Fluid renewal	Every 3 to 5 days
Post-thaw recovery	After thawing, plate the cells at 5 x 10^4 cells/cm^2 and allow the cells to recover from the freezing process and to adhere for at least 24 hours.

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.

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.

Disclaimer

Our cells are provided for in vitro laboratory research purposes exclusively and are not intended for clinical or diagnostic use, nor are they to be administered to humans or used for veterinary purposes. Users must adhere to all applicable guidelines and regulations for the handling and use of these cells in a research setting.

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

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