Product sheet

AH-130 FN Cells | 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.
Organism	Rat
Tissue	Liver
Disease	Hepatocellular carcinoma
Synonyms	AH130FN-TC, AH130FN, AH-130F(N), AH-130FN, AH 130 FN

Characteristics

Morphology	Round cells in suspension, Epithelial-like when adherent
Growth properties	Suspension, few adherent

Regulatory Data

Citation	AH-130 FN (Cytion catalog number 500451)
Biosafety level	1
NCBI_TaxID	10116

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CellosaurusAccession	CVCL_5683

Biomolecular Data

Tumorigenic	Yes, in Wistar rats.
Viruses	RAP-test negative. .

Handling

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)
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.
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

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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.