Product sheet

HuTu-80 Cells | 300218

General information

Description	The HuTu-80 cell line is derived from a human duodenal adenocarcinoma and serves as a valuable in vitro model for studying gastrointestinal cancer, particularly those affecting the small intestine. As an epithelial-like cell line, HuTu-80 is instrumental in exploring the cellular mechanisms underlying tumorigenesis, cancer progression, and response to various therapeutic agents. The cells exhibit characteristics typical of adenocarcinoma, such as aberrant growth patterns and the ability to proliferate under laboratory conditions, making them suitable for both basic research and drug discovery applications. HuTu-80 cells are commonly used to investigate signal transduction pathways involved in gastrointestinal cancers, including those mediated by growth factors and their receptors, which are critical in the development and progression of adenocarcinomas. Researchers also utilize this cell line to study the effects of chemotherapeutic agents and other anti-cancer compounds, providing insights into potential treatments for duodenal and other gastrointestinal cancers. Due to their origin and well-characterized nature, HuTu-80 cells are a robust model for cancer research, particularly in exploring the complex biology of gastrointestinal malignancies.
Organism	Human
Tissue	Duodenum
Disease	Adenocarcinoma
Synonyms	HUTU 80, Hutu 80, HuTu 80, HUTU-80, Hutu-80, HUTU80, HuTu80, Hutu80

Characteristics

Age	53 years
Gender	Male
Ethnicity	Caucasian
Morphology	Epithelial-like
Growth properties	Adherent

Regulatory Data

Citation	HuTu-80 (Cytion catalog number 300218)

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Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1301

Biomolecular Data

Receptors expressed	Bombesin
Antigen expression	Blood Type B, Rh+
Isoenzymes	PGM3, 1-2, PGM1, 1-2, ES-D, 1, Me-2, 2, AK-1, 1, GLO-1, 2, G6PD, B, Phenotype Frequency Product: 0.0017
Tumorigenic	Yes, in nude mice. Forms well differentiated papillary adenocarcinoma, (grade I)
Ploidy status	Aneuploid
Karyotype	(P12) hypodiploid to hyperdiploid with modal number = 46

Handling

Culture Medium	EMEM (MEM Eagle), w: 2 mM L-Glutamine, w: 2.2 g/L NaHCO3, w: EBSS (Cytion article number 820100a)
Supplements	Supplement the medium with 10% FBS and 1% NEAA
Dissociation Reagent	Accutase
Doubling time	26 to 30 hours
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 Accutase, 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.

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Seeding density	1 to 2 x 10^4 cells/cm^2 is recommended
Fluid renewal	2 to 3 times per week
Post-Thaw Recovery	Fast
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.