Product sheet

HGC-27 Cells | 300436

General information

Description	HGC-27 is a human gastric carcinoma cell line derived from the metastatic site of an adult patient. The cell line exhibits an epithelial morphology and is commonly used in the study of gastric cancer pathogenesis and the cellular responses to various chemotherapy agents. HGC-27 cells have been utilized in numerous studies to investigate mechanisms of cancer cell proliferation, apoptosis, and metastasis. They serve as a valuable model for understanding the complex molecular interactions and pathways involved in gastric cancer, including the response to therapeutic compounds and the investigation of novel drug targets. These cells are also instrumental in studying the role of various genetic and epigenetic modifications in gastric cancer progression. Research using HGC-27 has contributed to insights into cellular processes like epithelial-to-mesenchymal transition (EMT), a critical event in cancer metastasis. Additionally, the cell line has been used to explore receptor signaling pathways and their impact on cancer cell behavior, providing crucial data for the development of targeted therapies. Overall, HGC-27 is an important tool in the advancement of gastric cancer research, helping to pave the way for new therapeutic strategies and improving our understanding of disease mechanisms.
Organism	Human
Tissue	Gastric
Disease	Gastric adenocarcinoma
Metastatic site	Lymph node
Synonyms	HGC 27, HGC27

Characteristics

Age	Unspecified
Gender	Unspecified
Morphology	Epithelial-like, polygonal or short spindle-shaped
Growth properties	Monolayer, adherent

Regulatory Data

Citation	HGC-27 (Cytion catalog number 300436)

HGC-27 Cells | 300436

Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1279

Biomolecular Data

Protein expression	P53 negative
Tumorigenic	Yes

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
Dissociation Reagent	Accutase
Doubling time	17 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.
Seeding density	1 to 2 x 10^4 cells/cm^2
Fluid renewal	2 to 3 times per week
Post-Thaw Recovery	Start culture from cryovial at a cell density of 2 to 3 x 10^4 cells/cm^2. The cells will recover within 24 to 48 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

HGC-27 Cells | 300436

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.