Product sheet

HROGas03 Cells | 300437

General information

Description	The HROGas03 cell line is derived from the gastric adenocarcinoma of an adult female patient. Gastric adenocarcinoma, a common type of stomach cancer, arises from the glandular epithelial cells of the stomach lining and is often associated with poor prognosis. As a model, HROGas03 provides an invaluable resource for studying the molecular pathways involved in the initiation, progression, and therapeutic resistance of gastric adenocarcinoma. The age-related aspects of the donor, such as potential genomic instability and alterations in tumor microenvironment, can provide unique insights into cancer biology in older individuals. This cell line allows researchers to explore key molecular mechanisms driving gastric cancer, such as mutations in tumor suppressor genes (e.g., TP53), alterations in the cell cycle, and dysregulated signaling pathways, including the Wnt, MAPK, and PI3K/AKT pathways. These pathways are often implicated in the survival, proliferation, and metastatic potential of gastric cancer cells. The HROGas03 cell line can also be used to assess the efficacy of targeted therapies, chemotherapeutic agents, or combination treatments, potentially leading to improved therapeutic strategies for gastric cancer patients, especially in older demographics.
Organism	Human
Tissue	Stomach
Disease	Gastric adenocarcinoma

Characteristics

Age	80 years
Gender	Female
Ethnicity	Caucasian
Morphology	Epithelial-like
Growth properties	Adherent/Suspension

Regulatory Data

Citation	HROGas03 (Cytion catalog number 300437)
Biosafety level	1
NCBI_TaxID	9606

HROGas03 Cells | 300437

CellosaurusAccession	CVCL_2U70

Biomolecular Data

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
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.
Freeze medium	As a cryopreservation medium, we use 50% basal medium + 40% FBS + 10% DMSO, 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

HROGas03 Cells | 300437

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.