Product sheet

DAN-G Cells | 300162

General information

Description	The DAN-G cell line is derived from a human pancreatic carcinoma. It is extensively utilized in research focused on pancreatic cancer, particularly in studies pertaining to tumorigenesis, metastasis, and chemotherapy resistance. The genetic profile of DAN-G includes mutations in key oncogenes and tumor suppressor genes, which are characteristic of pancreatic adenocarcinomas. This makes the cell line a valuable model for understanding the molecular mechanisms underlying pancreatic cancer and for testing new therapeutic strategies. In addition to its applications in cancer research, the DAN-G cell line has been used to study the cellular processes involved in the progression of pancreatic ductal adenocarcinoma, including cell cycle regulation, apoptosis, and signal transduction pathways. The cells exhibit aggressive in vitro growth characteristics and have the ability to form tumors in immunocompromised mice, which simulates the human disease and provides an in vivo system for evaluating the efficacy of anticancer drugs. Researchers also employ this cell line to investigate the role of the tumor microenvironment in pancreatic cancer progression and resistance to therapy.
Organism	Human
Tissue	Pancreas
Disease	Adenocarcinoma
Synonyms	Dan-G, DanG, DANG

Characteristics

Age	68 years
Gender	Female
Morphology	Epithelial-like
Growth properties	Adherent

Regulatory Data

Citation	DAN-G (Cytion catalog number 300162)
Biosafety level	1
NCBI_TaxID	9606

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CellosaurusAccession	CVCL_0243

Biomolecular Data

Protein expression	P53 negative
Tumorigenic	Yes, in nude mice
Mutational profile	DAN-G cells carry a homozygous Kras mutation in codon12: GGT(Gly) >GTT(Val)

Handling

Culture Medium	RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Supplements	Supplement the medium with 10% FBS
Dissociation Reagent	Accutase
Doubling time	33 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	3 to 4 x 10^4 cells/cm^2 will yield in a confluent layer in about 4 days
Fluid renewal	2 to 3 times per week
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.
Flask Coating	None
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.