Product sheet

Panc 03.27 Cells | 305381

General information

Description	Panc 03.27 (PL11) is a human pancreatic adenocarcinoma cell line derived from a primary tumor. This cell line is a valuable resource for studying the molecular and genetic alterations characteristic of pancreatic cancer, a disease with notoriously poor prognosis and limited treatment options. Panc 03.27 is particularly utilized in research focused on genomic instability, allelic loss, and tumor suppressor gene alterations. This cell line is characterized by significant chromosomal abnormalities, including regions of allelic loss and homozygous deletions, as revealed through high-resolution SNP arrays. Such deletions frequently implicate loci associated with tumor suppressor genes, providing insight into the genetic mechanisms driving pancreatic tumorigenesis. Panc 03.27 has been instrumental in understanding the impact of chromosomal instability patterns on the progression and heterogeneity of pancreatic cancers, highlighting genomic ""holes"" or regions prone to homozygous deletions. Panc 03.27 is used in preclinical research to evaluate novel therapeutic approaches, including those targeting genetic vulnerabilities specific to pancreatic cancer. Its genomic profile makes it a key model for studies of somatic mutations, gene loss, and tumor progression, helping to identify potential biomarkers and treatment targets. The cell line's ability to provide consistent and reproducible results ensures its ongoing importance in pancreatic cancer research and drug development.
Organism	Human
Tissue	Pancreas
Disease	Adenocarcinoma
Synonyms	Panc 3.27, Panc-03.27, PANC-03-27, Panc_03_27, Panc-3_27, PANC3.27, Panc3.27, Panc3_27, Panc-327, PANC 327, Panc327, PANC0327, Panc0327, PL11, PL-11

Characteristics

Age	65 years
Gender	Female
Ethnicity	Caucasian
Morphology	Epithelial-like
Cell type	Ephitelial
Growth properties	Adherent

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Regulatory Data

Citation	Panc 03.27 (Cytion catalog number 305381)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_1635

Biomolecular Data

Antigen expression	MHC class I +; MHC class II -; Blood type A; Rh+
Oncogenes	KRAS mutant (G12V)
Mutational profile	Mutation: KRAS, Simple, p.Gly12Val (c.35G>T), Heterozygous; Mutation: TP53, Simple, c.375+5G>T, Homozygous

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 15% FBS and 0,01 mg/ml human recombinant insulin
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.
Seeding density	2-4*10^4/cm^2
Fluid renewal	2 to 3 times per week

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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.