Product sheet

266-6 Cells | 305363

General information

Description	The 266-6 cell line is a mouse pancreatic acinar cell model that has been extensively used in studies investigating pancreatic physiology and pathophysiology, particularly related to pancreatitis and nutrient metabolism. This cell line is derived from mouse pancreatic acinar cells, which are specialized for the production and secretion of digestive enzymes. Research on 266-6 cells has demonstrated their utility in exploring cell death mechanisms, including ferroptosis, a type of regulated necrosis driven by lipid peroxidation. In particular, studies have shown that 266-6 cells, when exposed to agents such as trypsin, cerulein, or alcohol, become sensitized to ferroptosis. This suggests that 266-6 cells are a valuable model for studying the molecular pathways involved in pancreatic injury, especially in conditions like acute or chronic pancreatitis. Additionally, 266-6 cells have been used to study nutrient transport mechanisms, such as the uptake of thiamin (vitamin B1) and its phosphorylated form, thiamin pyrophosphate (TPP). Chronic exposure to factors such as alcohol or proinflammatory cytokines has been shown to impair the uptake of thiamin by these cells. This impairment occurs at both the transcriptional and protein expression levels of the thiamin transporters THTR-1 and THTR-2, as well as the mitochondrial TPP transporter (MTPPT), impacting pancreatic cell metabolism and contributing to mitochondrial dysfunction.
Organism	Mouse
Tissue	Pancreas
Disease	Mouse pancreatic acinar neoplasm

Characteristics

Age	Adult
Gender	Unspecified
Morphology	Epithelial-like
Cell type	Pancreatic acinar cell
Growth properties	Adherent

Regulatory Data

Citation	266-6 (Cytion catalog number 305363)

266-6 Cells | 305363

Biosafety level	2
NCBI_TaxID	10090
CellosaurusAccession	CVCL_3481
GMO Status	GMO-S1: This mouse pancreatic acinar cell line contains an SV40 large T antigen expression cassette under control of the elastase-1 promoter, driving immortalization of exocrine pancreatic cells. This classification applies only within Germany and may differ elsewhere.

Biomolecular Data

Receptors expressed	Muscarinic acetylcholine receptor

Handling

Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 3.7 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
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 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.