Data Sheet

BCRJ Code:	0425
Cell Line:	CFPAC-1
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Pancreas
Cell Type:	Epithelial Cell
Morphology:	Epithelial
Disease:	Cystic Fibrosis; Ductal Adenocarcinoma
Growth Properties:	Adherent
Sex:	Male
Age/Ethinicity:	26 Year / White
Derivation:	This line was derived from a ductal adenocarcinoma (liver metastasis) from a patient with cystic fibrosis.
Applications:	3D cell culture; Genetic disorder research
DNA Profile:	Amelogenin: X,Y CSF1PO: 10 D13S317: 12 D16S539: 9,11 D5S818: 10,11 D7S820: 8,10 TH01: 8 TPOX: 8 vWA: 17 D3S1358: 16 D21S11: 30,31.2 D18S51: 12 Penta_E: 10,12 Penta_D: 11,13 D8S1179: 11,15 FGA: 21,22 D19S433: 13,15 D2S1338: 18,23
Tumor Formation::	Yes, in nude mice (passage 34); Metastic liver
Biosafety:	1

Addtional Info:	The cells exhibit ion transport activities consistent with cystic fibrosis and express the product of the CF gene (cystic fibrosis transmembrane regulator, CFTR). CFPAC-1 cells show no effect of cAMP agonists, adenyl cyclase stimulators or phosphodiesterase inhibitors on Cl- flux, but do respond to Ca++ ionophores with increase Cl- efflux. The cells have the most common form of the CF mutation, deletion of three nucleotides resulting in the absence of phenylalanine at position 508. CFPAC-1 cells have epithelial morphology and polarization with apical microvilli, tight junctions and gap junctions.
Culture Medium:	Iscove's Modified Dulbecco's Medium (IMDM) contains 4 mM L-glutamine, 4500 mg/L glucose and fetal bovine serum to a final concentration of 10%.
Subculturing:	Volumes are given for a 75 cm2 flask. Increase or decrease the amount of dissociation medium needed proportionally for culture vessels of other sizes. Remove and discard culture medium. Briefly rinse the cell layer with 0.25% (w/v) Trypsin- 0.53 mM EDTA solution to remove all traces of serum that contains trypsin inhibitor. Add 2.0 to 3.0 mL of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 15 minutes). Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37°C to facilitate dispersal. Add 6.0 to 8.0 mL of complete growth medium and aspirate cells by gently pipetting. Add appropriate aliquots of the cell suspension to new culture vessels. Incubate cultures at 37°C.
Subculturing Medium Renewal:	Every 2 to 3 days
Subculturing Subcultivation Ratio:	1:3 to 1:10 is recommended
Culture Conditions:	Atmosphere: air, 95%; carbon dioxide (CO2), 5% Temperature: 37°C
Cryopreservation:	95% FBS + 5% DMSO (Dimethyl sulfoxide)

Thawing Frozen Cells:	SAFETY PRECAUTION: Is highly recommend that protective gloves and clothing always be used and a full face mask always be worn when handling frozen vials. It is important to note that some vials leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vessel exploding or blowing off its cap with dangerous force creating flying debris. 1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the Oring and cap out of the water. Thawing should be rapid (approximately 2 minutes). 2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions. 3. For cells that are sensitive to DMSO is recommended that the cryoprotective agent be removed immediately. Transfer the vial contents to a centrifuge tube containing 9.0 mL complete culture medium and spin at approximately 125 x g for 5 to 7 minutes. 4.Discard the supernatant and Resuspend cell pellet with the recommended complete medium (see the specific batch information for the culture recommended dilution ratio). 5. Incubate the culture in a appropriate atmosphere and temperature (see "Culture Conditions" for this cell line). NOTE: It is important to avoid excessive alkalinity of the medium during recovery of the cells. It is suggested that, prior to the addition of the vial contents, the culture vessel containing the growth medium be placed into the incubator for at least 15 minutes to allow the medium to reach its normal pH (7.0 to 7.6).
References:	Schoumacher RA, et al. A cystic fibrosis pancreatic adenocarcinoma cell line. Proc. Natl. Acad. Sci. USA 87: 4012-4016, 1990. PubMed: 1692630 McIntosh JC, et al. Pancreatic adenocarcinoma in a patient with cystic fibrosis. Am. J. Med. 85: 592, 1988. PubMed: 3177424
Depositors:	Banco de Células do Rio de Janeiro
ATCC:	crl-1918