**Product sheet**

**CFPAC-1 | 305066**

## General information

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| **Description** | 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. |
| **Organism** | Human |
| **Tissue** | Pancreas |
| **Disease** | Cystic fibrosis, Pancreatic ductal adenocarcinoma |
| **Metastatic site** | Liver |
| **Synonyms** | CFPac-1, CF PAC-1, CF-PAC1, CF-Pac1, CF Pac1, CFPAC1, CFPac1, CFPAC |

## Characteristics

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| **Age** | 26 years |
| **Gender** | Male |
| **Ethnicity** | European |
| **Morphology** | Epithelial |
| **Growth properties** | Adherent |

## Identifiers / Biosafety / Citation

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| **Citation** | CFPAC-1 (Cytion catalog number 305066) |
| **Biosafety level** | 1 |

## Expression / Mutation

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| **Protein expression** | Carcinoembryonic Antigen(Cea), 9Ng/Ml, Pancreatic Oncofetal Antigen(Poa), 28Ng/Ml, Adenocarcinoma Associated Antigen(Acaa), 5000Ng/Ml, Ca 19-9 Antigen, 12000 Units/Ml, Epithelial Keratins |
| **Antigen expression** | CA19-9 antigen, 12000 units/mL, epithelial keratins |
| **Tumorigenic** | Yes |

## Handling

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| **Culture Medium** | IMDM |
| **Medium supplements** | w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 25 mM HEPES, w: 1.0 mM Sodium pyruvate, w: 3.024 g/L NaHCO3 |
| **Passaging solution** | Accutase |
| **Subculturing** | Remove medium and rinse the adherent cells using PBS without calcium and magnesium (3-5 ml PBS for T25, 5-10 ml for T75 cell culture flasks). Add Accutase (1-2 ml per T25, 2.5 ml per T75 cell culture flask), the cell sheet must be covered completely. Incubate at ambient temperature for 8-10 minutes. Carefully resuspend the cells with medium (10 ml), centrifuge for 3 min at 300 g, resuspend cells in fresh medium and dispense into new flasks which contain fresh medium. |
| **Split ratio** | 1:2 to 1:4 |
| **Fluid renewal** | 2 to 3 times per week |
| **Freeze medium** | CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100) |
| **Handling of cryopreserved cultures** | The cells come deep-frozen shipped on dry ice. Please make sure that the vial is still frozen. If immediate culturing is not intended, the cryovial must be stored below -150 degree Celsius after arrival. If immediate culturing is intended, please follow the below instructions: Quickly thaw by rapid agitation in a 37 degree Celsius water bath within 40-60 seconds. The water bath should have clean water containing an antimicrobial agent. As soon as the sample has thawed, remove the cryovial from the water bath. A small ice clump should still remain and the vial should still be cold. From now on, all operations should be carried out under aseptic conditions. Transfer the cryovial to a sterile flow cabinet and wipe with 70% alcohol. Carefully open the vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of culture medium (room temperature). Resuspend the cells carefully. Centrifuge at 300 x g for 3 min and discard the supernatant. The centrifugation step may be omitted, but in this case the remains of the freeze medium have to be removed 24 hours later. Resuspend the cells carefully in 10 ml fresh cell culture medium and transfer them into two T25 cell culture flasks. All further steps are described in the subculture section. |

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| **Handling of proliferating cultures** | One or two cell culture flasks come filled with cell culture medium. Collect the entire medium in 1 or 2 x 50 ml centrifuge tubes, respectively. Carefully add 5 ml of cell culture medium to each T25 cell culture flask. Control the cell morphology and confluency under the microscope. Incubate at 37 degree Celsius for a minimum of 24 hours. Spin down the collected medium at 300 x g for 3 minutes to collect the cells which may have detached during transit. If a cell pellet is visible, resuspend the cells in 5 ml of cell culture medium and transfer to a T25 cell culture flask. Incubate at 37 degree Celsius for a minimum of 24 hours. |

## Quality control / Genetic profile / HLA

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| **Sterility** | Mycoplasma contaminations are ruled out through PCR-based and luminescence-based mycoplasma assays. The absence of bacterial, fungal or yeast contamination is controlled through daily visual cell monitoring. |

**STR 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
**D6S1043**: 20
**D2S1338**: 18,23
**D12S391**: 17
**D19S433**: 13,15