BCRJ Code:	0265
Cell Line:	Capan-1
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Pancreas; Derived From Metastatic Site: Liver
Morphology:	Epithelial
Disease:	Adenocarcinoma
Growth Properties:	Adherent
Sex:	Male
Age/Ethinicity:	40 Year / Caucasian
Applications:	This cell line is a suitable transfection host.
DNA Profile:	Amelogenin: X CSF1PO: 11 D13S317: 9 D16S539: 13,14 D5S818: 11 D7S820: 10,11 THO1: 6 TPOX: 8,11 vWA: 16
Tumor Formation::	Yes, in nude mice; forms adenocarcinoma consistent with pancreatic duct carcinoma
Products:	Antigen Expression:Blood Type A, Rh+; HLA A2, A9, B13, B17 Genes Expressed: mucin,Blood Type A; Rh+; HLA A2, A9, B13, B1
Biosafety:	1
Addtional Info:	The cells will slough off of the growth surface if they become too heavy. Capan-1 expresses the cystic fibrosis transmembrane conductance regulator (CFTR) and secrete gastric type mucins.

Culture Medium:	Iscove's Modified Dulbecco's Medium (IMDM) contains 2 mM L-glutamine, 4500 mg/L glucose and 20% of Fetal bovine serum.
Subculturing:	Volumes used in this protocol are for 75 cm2 flasks; proportionally reduce or increase amount of dissociation medium for culture vessels of other sizes. Remove and discard culture medium. T-75 flasks are recommended for subculturing this product. Briefly rinse the cell layer with PBS without calcium and magnesium to remove all traces of serum which 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 Resuspend the cell pellet in fresh growth medium. Add appropriate aliquots of the cell suspension to new culture vessels. Incubate cultures at 37°C. NOTE: For more information on enzymatic dissociation and subculturing of cell lines consult Chapter 12 in Culture of Animal Cells, a manual of Basic Technique by R. Ian Freshney, 6th edition, published by Alan R. Liss, N.Y., 2010.
Subculturing Medium Renewal:	Every 2 to 3 days
Subculturing Subcultivation Ratio:	1:2 to 1:4 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:	22536: Fogh J, et al. Absence of HeLa cell contamination in 169 cell lines derived from human tumors. J. Natl. Cancer Inst. 58: 209-214, 1977. PubMed: 833871 22539: Fogh J, et al. One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. J. Natl. Cancer Inst. 59: 221-226, 1977. PubMed: 327080 22986: Fanjul M, Hollande E. Morphogenesis of "duct-like" structures in three-dimensional cultures of human cancerous pancreatic duct cells (Capan-1). In Vitro Cell. Dev. Biol. Anim. 29A: 574-584, 1993. PubMed: 8354666 23079: Lan MS, et al. Polypeptide core of a human pancreatic tumor mucin antigen. Cancer Res. 50: 2997-3001, 1990. PubMed: 2334903 23153: Chambers JA, Harris A. Expression of the cystic fibrosis gene and the major pancreatic mucin gene, MUC1, in human ductal epithelial cells. J. Cell Sci. 105: 417-422, 1993. PubMed: 7691840 23226: Pollack MS, et al. HLA-A, B, C and DR alloantigen expression on forty-six cultured human tumor cell lines. J. Natl. Cancer Inst. 66: 1003-1012, 1981. PubMed: 7017212 34271: Hollande E, et al. Expression of estrogen receptors during growth of human pancreatic adenocarcinoma cells (Capan-1)-relationship with differentiation. In Vitro Cell. Dev. Biol. Anim. 34: 593-599, 1998. PubMed: 9719420
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Cellosaurus:	CVCL_0237