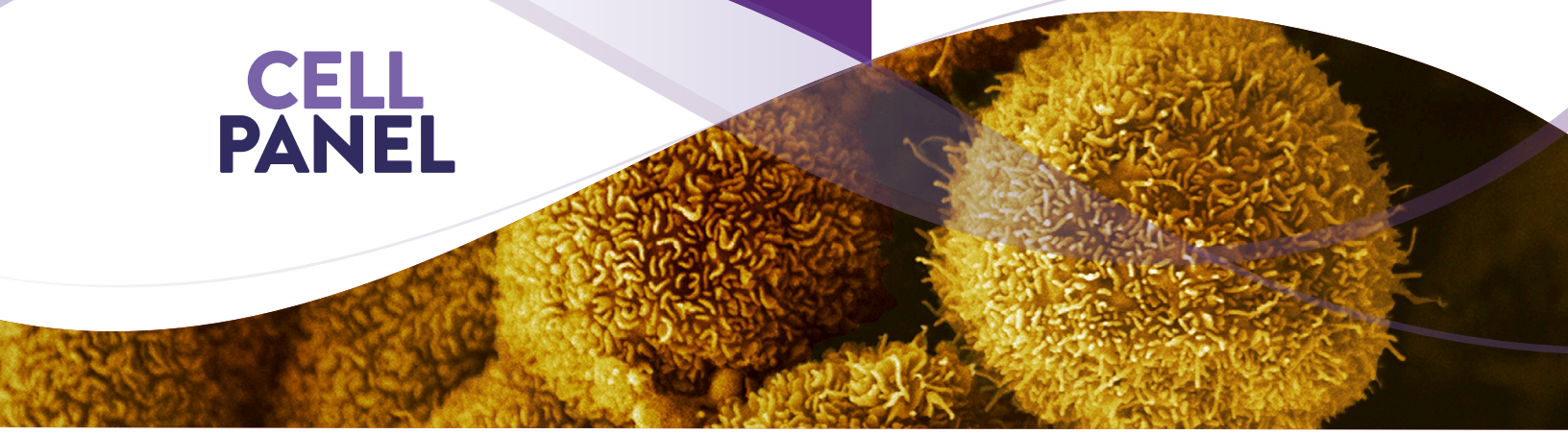
ATCC

CELL PANEL



PANCREATIC CANCER P53 HOTSPOT MUTATION CELL PANEL

p53 is a tumor suppressor protein encoded by the TP53 gene that responds to DNA damage by regulating cell-cycle arrest, apoptosis, and senescence. The Pancreatic Cancer p53 Hotspot Mutation Cell Panel (ATCC® TCP-2060™) is composed of six select adhesion cell lines derived from individuals with pancreatic cancers. This panel combines wild-type p53 cell lines with mutant p53 cell lines that carry hotspot mutations in one of the following codons: 220, 245, 248, 255, and 273. The p53 status of each line was sequenced and validated by ATCC. The panel is useful for anti-cancer drug targeting or reactivation of mutant p53 as well as studies related to p53 molecular mechanisms.

ATCC® No.	Name	Primary Site, Tissue	Histology	TP53 status	Zygosity	Gene mutation†	Protein Sequence†
CRL-2172™	SW1990	pancreas	adenocarcinoma	WT	-	-	-
CRL-1837™	SU.86.86	pancreas	adenocarcinoma	MUT	homozygous	c.733G>A	p.G245S
CRL-1687™	BXPC-3	pancreas	adenocarcinoma	MUT	homozygous	c.659A>G	p.Y220C
CRL-2547™	Panc 10.05	pancreas	adenocarcinoma	MUT	heterozygous	c.764T>A	p.I255N
CRL-1420™	MIA-PaCa-2	pancreas	carcinoma	MUT	homozygous	c.742C>T	p.R248W
CRL-1469™	PANC-1	pancreas	carcinoma	MUT	homozygous	c.818G>A	p.R273H

†For a description of the sequence variation nomenclature please refer to: den Dunnen JT and Antonarakes SE (2000), Hum. Mutat. 15:7-12.

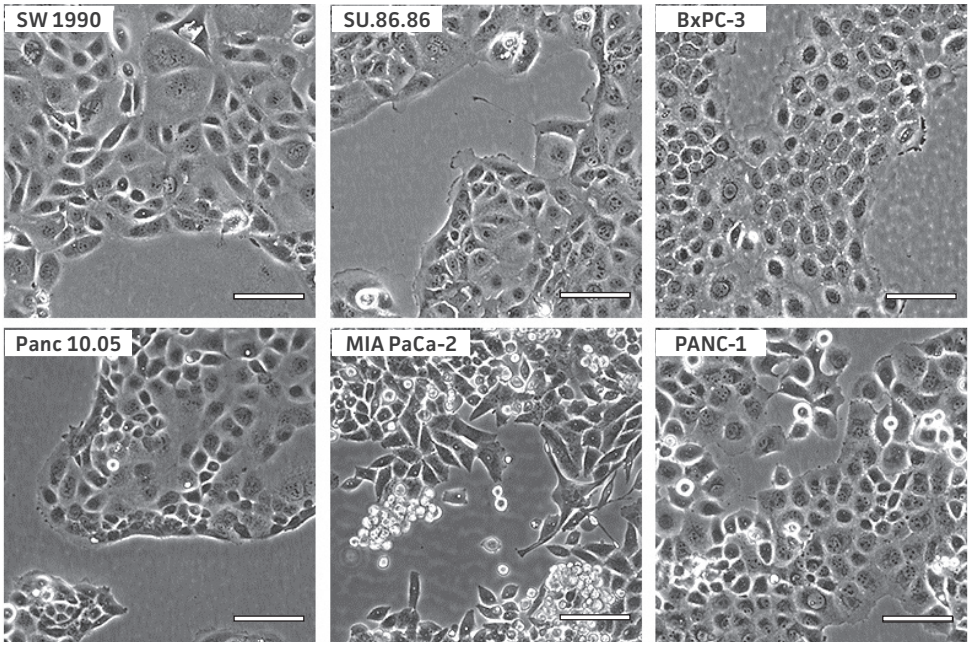


Figure 1: Cell morphology of the six cell lines in the Pancreatic cancer p53 Hotspot Mutation Cell Panel. One p53 wild-type pancreatic cancer cell line and five p53 hotspot mutation pancreatic cancer cell lines were maintained in ATCC recommended culture conditions. Cell morphology was observed under Nikon™ microscopy, and images of the indicated cell lines were captured by Olympus® digital camera.

Scale Bar = 100µm

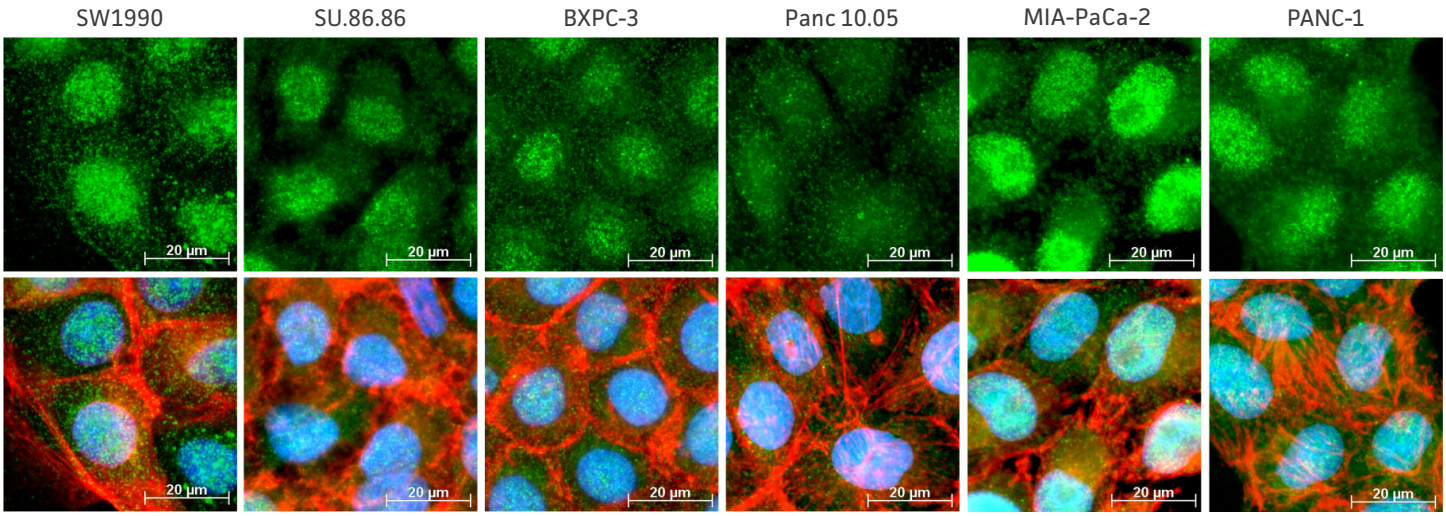


Figure 2: Immunofluorescence staining of p53. The indicated p53 wild-type and p53 mutation cells were grow on collagen-coated coverslips. Cells were fixed with 4% paraformaldehyde. p53 was stained with p53 primary antibody and Alexa Fluor 488 secondary antibody (green). F-actin was visualized with phalloidin Alexa Fluor 594 (red). Nuclei of the cells were visualized with Hoechst 33342 (blue). Single florescence channel images of p53 staining are shown in the upper row, and multichannel merged images are shown in the bottom row.

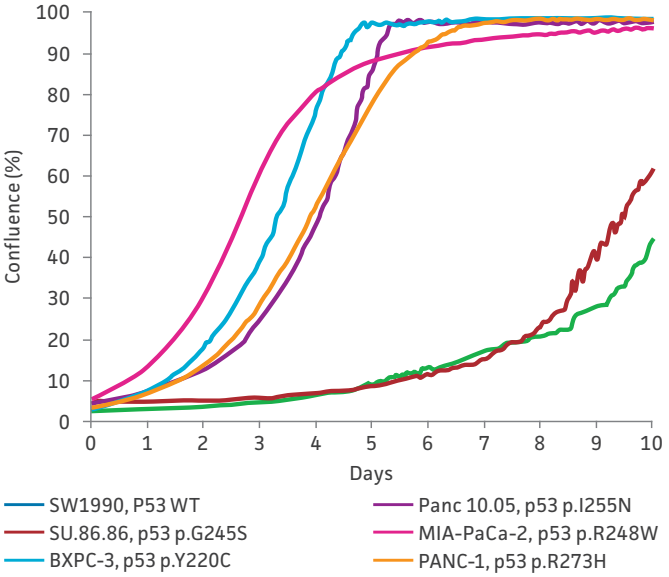


Figure 3: Cell growth kinetics. The indicated p53 wild-type and p53 mutation cells were cultured in ATCC recommended media, and plated at 3000 cells/well in 96-well plate. The cell growth kinetics were constantly monitored for 10 days using a label-free automated IncuCyte® live-cell imaging system (Essen Bioscience).

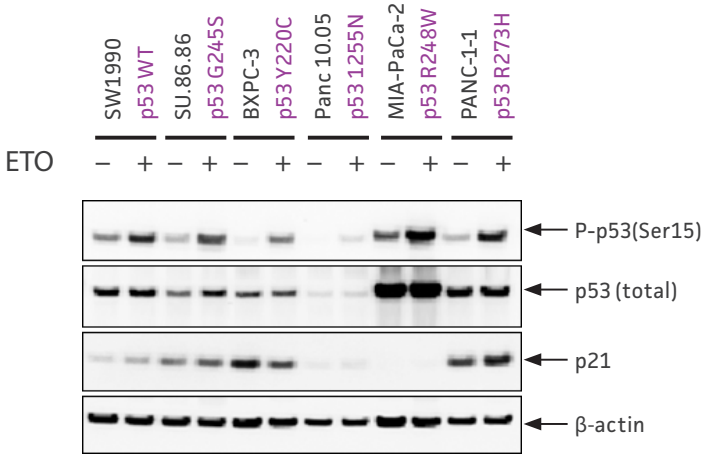


Figure 4: The indicated p53 wild-type and p53 mutation cells were treated with 20 µM etoposide (ETO) for 8 hours to induce DNA damage, or treated with DMSO as a control. Western blotting was used to examine phosphorylation of p53 at Serine 15, total protein expression of p53, and expression of p21, a downstream target of p53. β-actin protein was also examined as a control.

Testing performed for each ATCC cell line was completed on current (2012) distribution material. ATCC provides these data in good faith, but makes no warranty, express or implied, nor assumes any legal liability or responsibility for any purpose for which the data are used.

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