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Breast Cancer Biomarkers Cell Line Panel 1

The Breast Cancer Biomarkers Cell Line Panel 1 (ATCC® No. TCP-1004™) is comprised of 7 tumor cell lines isolated from a variety of primary and metastatic sites, and annotated with pre-operative chemotherapy treatments and published positive and negative biomarkers. The table below provides more information for the cell lines included in this panel.

				Age				
ATCC® No.	Designation	Pathology	Site of Isolation	(years)	Positive Markers ^{1,2,3}	Negative Markers ^{1,2,3,4,5,6,7}	Other significant features	Patient Treatment ¹
<u>CRL-1897</u> ™	UACC-812	Infiltrating ductal carcinoma	Breast	43	HER-2/neu	ER, PR, EGFR, P- glycoprotein		Vinblastine, Adriamycin, Cytoxan, Cyclophosphamide, Methotrexate, 5-fluorouracil
<u>CRL-1902</u> ™	UACC-893	Infiltrating ductal carcinoma	Breast	57	HER-2/neu	ER, PR, EGFR, P- glycoprotein, MASPIN	MASPIN promoter methylation has been reported for this line. ⁵	None
<u>CRL-2983</u> ™	UACC-3199	Infiltrating ductal carcinoma	Axillary nodes	58	EGFR	ER, PR, HER-2/neu	Methylated BRCA-1 promoter.	Cytoxan, Adriamycin, 5- fluorouracil, Tamoxifen, Mitoxantrone, Vinblastine
<u>CRL-2988</u> ™	UAC-3133	Poorly differentiated adenocarcinoma and lobular carcinoma	Pleural fluid	63	HER-2/neu, BMP-3	ER (very low), PR, EGFR, MASPIN, DSC3, BMP-2	MASPIN promoter methylation has been reported for this line. ⁵	Surgery only
<u>CRL-3127</u> ™	UACC-1179	Adenocarcinoma	Pleural fluid	62	HER-2/neu	ER, PR, EGFR, MASPIN, DSC3	p53 R213X mutation and MASPIN promoter methylation have been reported for this line. ^{5,8}	Adriamycin, Cytoxan, Methotrexate, Tamoxifen
<u>CRL-3166</u> ™	UACC-732	Adenocarcinoma	Pleural fluid	35	HER-2/neu, PR	ER, EGFR	Drug resistant cell line to cyclin D kinase 4/6 inhibitor and HER-2 inhibitors. ⁹	Vinblastine, Adriamycin, Cytoxan
CRL-3180™ References	UACC-2087	Adenocarcinoma	Pleural fluid	53	EGFR	ER, PR, HER-2/neu, vimentin, MASPIN, DSC3	p53 V216M mutation has been reported in this cell line. It has also been reported that the MASPIN promoter is not methylated. ^{5,10}	Cyclophosphamide, Methotrexate, 5-fluorouracil, Thymidine phophorylase, Tamoxifen

References:

- 1. Robey IF, et al. Regulation of the Warburg Effect in Early-Passage Breast Cancer Cells. Neoplasia. 10(8):745-56, 2008. PubMed: 18670636
- 2. Alarmo EL, et al. A comprehensive expression survey of bone morphogenetic proteins in breast cancer highlights the importance of BMP4 and BMP7. Breast Cancer Res Treat. 103(2):239-46, 2007. PubMed: 17004110.
- 3. Ketolainen JM, et al. Prallel inhibition of cell growth and induction of cell migration and invasion in breast cancer cells by bone morphogenetic protein 4. Breast Cancer Res Treat. 124(2):377-86, 2010. PubMed: 20182795
- 4. Meltzer P, et al. Establishment of two new cell lines derived from human breast carcinomas with HER-2/neu amplification. Br. J. Cancer 63: 727-735, 1991. PubMed: 1674877
- 5. Esteller, M. Cancer Metastasis Biology and Treatment: DNA Methylation, Epigenetics and Metastasis. Springer. AA Dordrecht, The Netherlands. 2005. pp. 142-43. 6. Domann FE, et al. Epigenetic silencing of maspin gene expression in human breast cancers. Int I Cancer, 85(6):805-10, 2000, PubMed: 10709100
- 7. Oshiro MM, et al. Epigenetic silencing of DSC3 is a common event in human breast cancer. Breast Cancer Res. 7(5):R669-80, 2005. PubMed: 16168112
- 8. Oshiro MM, et al. Mutant p53 and aberrant cytosine methylation cooperate to silence gene expression. Oncogene. 22(23):3624-34, 2003. PubMed: 12789271
- 9. Finn RS, et al. PD 0332991, a selective cyclin D kinase 4/6 inhibitor, preferentially inhibits proliferation of luminal estrogen receptor-positive human breast cancer cell lines in vitro. Breast Cancer Res. 11(5): R77, 2009. PubMed: 19874578
- 10. Watts GS, et al. The acetyltransferase p300/CBP-associated factor is a p53 target gene in breast tumor cells. Neoplasia. 6(3): 187-94, 2004. PubMed: 15153330
- 11. Rice | C. et al. Transcriptional repression of BRCA1 by aberrant cytosine methylation, histone hypoacetylation and chromatin condensation of the BRCA1 promoter. Nucleic Acids Res. 28(17): 3233-3239, 2000. PubMed: 10954590

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