



Cat No: **BRC1503 - Breast cancer tissue array**

Lot#	Cores	Size	Cut	Format	QA/QC	Pantomics, Inc.	
BRC150301	150	1.1mm	4um	10X15	H&E, IHC anti-Cytokeratin		

Recommended applications: For Research use only. RNA or protein breast cancer/non-tumor tissue profiling using IHC or ISH; Antibody characterization.

Description: Breast cancer tissue array, non-overlapping with BRC1501 and BRC1502, 150 cores including 75 cases of normal, reactive, premalignant and malignant (various grades and stages) tissues of the breast in duplicates. All the tissues were from surgical resection. They were fixed in 10% neutral buffered formalin for 24 hours and processed using identical SOPs. Sections were picked onto Superfrost Plus or APES coated Superfrost slides. They all have a guaranteed six months' shelf-life at 4C from the date of shipment. Each slide has >95% tissue core retention.

Array position	Age	Sex	Histology	Grade	Stage (TNM)	ER	PR	HER2	P53	EGFR	Ki67
A1,B1	26	F	Normal			++, 5%	++, 2%	+-	-	+-	++~+++ +, 2%
A2,B2	45	F	Adenosis			+, 5%	++, 2%	+-	-	+-	++, 1%
A3,B3	35	F	Adenosis			++, 50%	++, 5%	+-	-	+-	++~+++ +, 5%
A4,B4	23	F	Fibroadenoma			++, 30%	++, 60%	+-	-	-	++, 2%
A5,B5	40	F	Fibrocystic disease			+~+++ 50%	++, 30%	+-	-	-	-
A6,B6	48	F	Invasive ductal carcinoma	II	T2N0M0	++, 60%	++, 50%	-	-	-	-
A7,B7	42	F	Invasive ductal carcinoma	II	T2N0M0	++~++++ 80%	++~++++ 50%	++~++++	-	-	++, 5%
A8,B8	32	F	Invasive ductal carcinoma	II	T2N0M0	++~++++ 80%	++, 60%	-	-	-	++~+++ +, 5%
A9,B9	48	F	Invasive ductal carcinoma	II~III	T2N0M0	++~++++ 60%	++~++++ 15%	+~+++	-	-	++, 5%
A10,B10	44	F	Invasive ductal carcinoma	II~III	T2N0M0	++~++++ 80%	++, 50%	+-	+~+++ 2%	-	++, 2%
A11,B11	50	F	Invasive ductal carcinoma	III	T2N0M0	++, 50%	++, 2%	++~++++	+-	-	-
A12,B12	63	F	Invasive ductal carcinoma	II	T2N0M0	++~++++ 60%	-	+~+++	-	-	+~+++ 2%
A13,B13	42	F	Invasive lobular carcinoma	II~III	T2N0M0	+, 5%	++, 50%	+-	-	-	-
A14,B14	46	F	Invasive ductal carcinoma	II~III	T2N0M0	-	-	+-	+++ 80%*	+	++~+++ +, 70%
A15,B15	34	F	Invasive lobular carcinoma	II~III	T2N0M0	-	++, 1%	-	-	-	+~+++ 2%
C1,D1	53	F	Invasive ductal carcinoma	II	T2N0M0	+++ 70%	-	++	-	-	++~+++ +, 5%
C2,D2	25	F	Lobular carcinoma in situ	I	TisN0M0	++~++++ 50%	+~+++ 30%	++~++++	-	+	++, 5%
C3,D3	45	F	Invasive lobular carcinoma	II~III	T2N0M0	++, 80%	-	-	-	-	+, 2%
C4,D4	44	F	Invasive ductal carcinoma	II~III	T2N0M0	-	-	++~++++	-	-	+, 2%
C5,D5	38	F	Invasive ductal carcinoma	I~II	T2N0M0	+~+++ 30%	++, 30%	+	-	-	-



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C6,D6	70	F	Invasive ductal carcinoma	II	T2N0M0	+++ , 90%	++~++++, 90%	+	-	-	++ , 2%
C7,D7	56	F	Invasive ductal carcinoma	II~III	T2N0M0	-	-	++~++++	+-	-	++++, 5%
C8,D8	52	F	Invasive ductal carcinoma	I	TisN0M0	-	-	+~++	-	+	++++, 5%
C9,D9	68	F	Invasive ductal carcinoma	II~III	T1N0M0	++~++++, 90%	-	+-	-	-	++~+++ , 20%
C10,D10	68	F	Invasive ductal carcinoma	II~III	T3N2M0	+~+++ , 80%	-	-	-	-	++ , 10%
C11,D11	46	F	Invasive ductal carcinoma	II~III	T2N0M0	+++ , 80%	++~++++, 80%	+-	-	-	-
C12,D12	52	F	Invasive ductal carcinoma	II~III	T2N0M0	-	-	-	-	+	++~+++ , 10%
C13,D13	59	F	Invasive ductal carcinoma	II~III	T2N0M0	+, 50%	-	++~++++	+, 5%	-	++ , 5%
C14,D14	39	F	Invasive ductal carcinoma	II~III	T2N0M0	+++ , 60%	+, 5%	+-	-	-	++ , 2%
C15,D15	40	F	Invasive ductal carcinoma	II~III	T2N2M0	++~++++, 50%	-	++	-	-	++ , 5%
E1,F1	40	F	Invasive ductal carcinoma	II~III	T2N0M0	+~+++ , 80%	+, 2%	+++	+, 1%	-	++~+++ , 15%
E2,F2	60	F	Invasive ductal carcinoma	II~III	T2N0M0	+++ , 80%	+, 1%	+-	-	-	++ , 5%
E3,F3	50	F	Invasive ductal carcinoma	II~III	T2N0M0	++ , 80%	-	++	-	-	++ , 5%
E4,F4	45	F	Invasive ductal carcinoma	II~III	T2N0M0	+~+++ , 60%	++~++++, 60%	+-	++~++++, 80%	-	++~+++ , 15%
E5,F5	46	F	Invasive ductal carcinoma	II~III	T2N1M0	++ , 30%	++~++++, 30%	+	-	++	-
E6,F6	39	F	Invasive ductal carcinoma	II~III	T2N1M0	+++ , 80%	-	-	-	-	++ , 10%
E7,F7	48	F	Invasive ductal carcinoma	II~III	T2N0M0	++~++++, 60%	++~++++, 60%	++~++++	++~++++, 50%	-	++ , 10%
E8,F8	41	F	Invasive ductal carcinoma	II	T2N0M0	++ , 50%	++ , 50%	+-	-	-	++ , 2%
E9,F9	61	F	Invasive ductal carcinoma	I	T2N0M0	+++ , 80%	++ , 20%	-	-	-	-
E10,F10	86	F	Invasive carcinoma with apocrine features	III	T2N0M0	-	-	+	-	-	++ , 5%
E11,F11	34	F	Invasive ductal carcinoma	II~III	T2N0M0	-	-	++~++++	-	-	++ , 8%
E12,F12	64	F	Invasive ductal carcinoma	II	T2N0M0	+~+++ , 10%	-	++	-	-	++~+++ , 10%
E13,F13	35	F	Invasive lobular carcinoma	II~III	T2N1M0	+~+++ , 10%	-	++	++~++++, 30%	-	++~+++ , 5%
E14,F14	44	F	Invasive tubular carcinoma	II	T2N1M0	++ , 80%	++ , 60%	-	-	-	++~+++ , 10%
E15,F15	54	F	Invasive ductal carcinoma	II~III	T2N0M0	-	-	++	++ , 5%	++	++~+++ , 15%
G1,H1	40	F	Invasive ductal carcinoma	II	T2N0M0	+~+++ , 50%	++ , 60%	+	++~++++, 5%	-	++ , 2%
G2,H2	58	F	Invasive ductal carcinoma	II~III	T2N1M0	++~++++, 60%	-	++	-	-	++ , 5%
G3,H3	55	F	Invasive ductal carcinoma	II~III	T2N1M0	-	-	+++	++~++++, 60%	-	++ , 10%
G4,H4	74	F	Invasive ductal carcinoma	II	T2N0M0	+++ , 90%*	++~++++, 60%	+	-	-	++ , 2%



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G5,H5	50	F	Invasive ductal carcinoma	II-III	T2NOM0	-	-	++~+++	-	-	++, 10%
G6,H6	53	F	Invasive ductal carcinoma	II-III	T2NOM0	-	-	-	-	+	++, 10%
G7,H7	53	F	Invasive ductal carcinoma	II-III	T2NOM0	++~+++ 90%	+~+++ 50%	-	-	-	++, 5%
G8,H8	71	F	Invasive ductal carcinoma	II	T4NOM0	-	-	++	++~+++ 20%	++~+++ +	++, 15%
G9,H9	48	F	Invasive ductal carcinoma	II-III	T2NOM0	++, 80%	+++ 90%*	+	-	-	-
G10,H10	43	F	Invasive ductal carcinoma	II	T2NOM0	++~+++ 80%	+~+++ 50%	+	-	-	++, 5%
G11,H11	34	F	Invasive ductal carcinoma	I	T2NOM0	++~+++ 80%	+~+++ 50%	++	+, 2%	-	++, 10%
G12,H12	52	F	Invasive ductal carcinoma	II	T2NOM0	-	-	++~+++	+~+++ 30%	-	++, 5%
G13,H13	55	F	Invasive ductal carcinoma	II-III	T2N1M0	++~+++ 60%	-	-	-	-	++, 30%
G14,H14	54	F	Invasive ductal carcinoma	II	T2NOM0	-	-	+-	+++ 90%*	-	++~+++ +, 20%
G15,H15	40	F	Invasive ductal carcinoma	II	T2N1M0	++~+++ 30%	+~+++ 30%	-	-	-	-
I1,J1	34	F	Invasive ductal carcinoma	II-III	T2NOM0	+~+++ 60%	++, 60%	+-	-	-	+~+++ 5%
I2,J2	59	F	Invasive ductal carcinoma	II-III	T2NOM0	+++ 80%	-	+~+++	-	-	+~+++ 5%
I3,J3	76	F	Invasive ductal carcinoma	II	T2NOM0	-	-	-	++~+++ 80%	-	++, 20%
I4,J4	39	F	Invasive ductal carcinoma	II-III	T2NOM0	-	-	+~+++	-	-	++, 2%
I5,J5	33	F	Invasive ductal carcinoma	II-III	T2N1M0	-	-	-	+-	+	-
I6,J6	52	F	Invasive ductal carcinoma	II	T2NOM0	-	-	+~+++	+~+++ 20%	+	++, 2%
I7,J7	72	F	Invasive ductal carcinoma	II-III	T4NOM0	++~+++ 60%	+~+++ 15%	+-	+, 1%	-	++, 10%
I8,J8	35	F	Invasive ductal carcinoma	I~II	T3N1M0	+~+++ 5%	+~+++ 5%	++	+~+++ 10%	-	++, 5%
I9,J9	60	F	Invasive ductal carcinoma	II	T2NOM0	+++ 80%	++~+++ 80%	-	-	-	++, 2%
I10,J10	58	F	Invasive ductal carcinoma	II-III	T2NOM0	++, 60%	+~+++ 60%	+~+++	-	-	++, 5%
I11,J11	53	F	Invasive ductal carcinoma	II-III	T3NOM0	++, 10%	-	+-	+~+++ 30%	++	-
I12,J12	52	F	Invasive lobular carcinoma	II-III	T2NOM0	++, 50%	++, 1%	+	-	-	++, 5%
I13,J13	71	F	Invasive ductal carcinoma	II	T1NOM0	+++ 90%*	++~+++ 50%	-	-	-	++, 5%
I14,J14	70	F	Tubular mixed carcinoma	II-III	T1NOM0	+++ 90%	++ 60%	+	-	-	++, 5%
I15,J15	44	F	Invasive ductal carcinoma	I	T2NOM0	-	-	++~+++	-	-	-

Notes: Bake at 60C for 30 minutes before use. If antigen retrieving is needed, it is always a good idea to start with a protocol with weak to mild strength.

Staining Scoring: "-" – no staining; "+-" – borderline staining; "+" – weak staining; "++" – moderate staining; "+++" – strong staining; "%" – percentage of positive cells.



Certified by: Fancai Li, M.D.

TNM Classification: Breast carcinoma

T- Primary tumor

TX - Primary tumor cannot be assessed

TO - No evidence of primary tumor

Tis - Carcinoma in situ, intraductal carcinoma or lobular carcinoma in situ, or Paget's disease of the nipple with no tumor

T1 - Tumor 2 cm or less in greatest dimension

T2 - Tumor more than 2 cm but not more than 5 cm in greatest dimension

T3 - Tumor more than 5 cm in greatest dimension

T4 - Tumor of any size with direct extension to chest wall or skin

N - Regional lymph nodes

NX - Regional lymph nodes cannot be assessed

NO - No regional lymph node metastasis

N1 - Metastasis to movable ipsilateral lymph node(s)

N2 - Metastasis to ipsilateral lymph nodes(s) fixed to one another or to other structure

N3 - Metastasis to ipsilateral internal mammary lymph node(s)

M - Distant metastasis

MX - Distant metastasis cannot be assessed

MO - No distant metastasis

M1 - Distant metastasis

TNM classification of malignant tumours, Fifth Edition (1997)