



Cat No: **BRC1502 - Breast cancer tissue array**

| Lot# | Cores | Size | Cut | Format | QA/QC | Pantomics, Inc. | |
|-----------|-------|-------|-----|--------|---------------------------|-----------------|--|
| BRC150201 | 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, 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) | AR | ER | PR | HER2 | P53 | EGFR | Ki67 |
|----------------|-----|-----|-----------------------------------|--------|-------------|--------------|--------------|--------------|---------|-------------|--------|------------|
| A1,B1 | 47 | F | Normal/hyperplasia | | | +, 2% | ++, 10% | ++~++++, 10% | - | - | + | +~+++, 2% |
| A2,B2 | 40 | F | Normal/hyperplasia | | | +, 2% | +~+++, 5% | ++, 10% | - | - | ++ | ++, 5% |
| A3,B3 | 42 | F | Normal/hyperplasia | | | - | +~+++, 10% | ++, 2% | - | - | ++~+++ | ++, 5% |
| A4,B4 | 16 | F | Fibroadenoma | | | +, 5% | ++~++++, 50% | ++~++++, 50% | - | - | - | - |
| A5,B5 | 50 | F | Fibroadenoma | | | ++, 5% | +++ , 5% | +++ , 10% | + | - | ++ | ++, 2% |
| A6,B6 | 35 | F | Invasive ductal carcinoma | II~III | T4N0M0 | ++~+++ , 60% | ++++ , 90% | +~+++ , 30% | - | ++ , 2% | - | ++ , 20% |
| A7,B7 | 40 | F | Invasive ductal carcinoma | III | T3N0M0 | - | - | - | +++ | - | - | ++ , 2% |
| A8,B8 | 53 | F | Intraductal carcinoma | I | T3N0M0 | ++ , 2% | - | - | +++ | - | - | ++ , 2% |
| A9,B9 | 45 | F | Invasive ductal carcinoma | I~II | T3N0M0 | ++ , 5% | +++ , 80% | +++ , 70% | +~+ + | +~+++ , 2% | - | ++ , 2% |
| A10,B10 | 56 | F | Invasive ductal carcinoma | II~III | T2N0M0 | ++ , 10% | +++ , 100% | ++ , 5% | +++ | - | - | ++ , 15% |
| A11,B11 | 33 | F | Invasive ductal carcinoma | II~III | T2N0M0 | - | +, 10% | - | + - | - | + | +, 5% |
| A12,B12 | 37 | F | Invasive ductal carcinoma | II~III | T3N2M0 | - | +++ , 50% | ++ , 20% | + | - | - | ++ , 5% |
| A13,B13 | 50 | F | Invasive ductal carcinoma | II | T3N0M0 | - | - | - | +++~+++ | ++ , 60% | - | ++ , 5% |
| A14,B14 | 64 | F | Invasive tubulo-lobular carcinoma | II~III | T4N1M0 | +, 5% | +++ , 80% | +, 20% | - | +, 2% | - | +, 2% |
| A15,B15 | 44 | F | Invasive ductal carcinoma | II~III | T3N1M0 | ++~+++ , 50% | +~+++ , 10% | - | +++ | - | - | ++ , 10% |
| C1,D1 | 55 | F | Invasive ductal carcinoma | II~III | T2N1M0 | - | +, 5% | - | +++ | +~+++ , 15% | - | +, 5% |
| C2,D2 | 47 | F | Invasive ductal carcinoma | II~III | T2N0M0 | - | - | - | +++ | - | - | ++ , 15% |
| C3,D3 | 50 | F | Invasive ductal carcinoma | II~III | T2N1M0 | ++ , 5% | +++ , 60% | +++ , 50% | + | +, 2% | - | ++ , 5% |
| C4,D4 | 51 | F | Invasive ductal carcinoma | II~III | T4N3Mx | - | ++~+++ , 50% | +, 10% | - | - | - | +~+++ , 2% |



Advancing Biomedical Science Through Tissue Arrays

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|---------|----|---|------------------------------|--------|---------|------------|------------|------------|-------|------------|-------|------------|
| C5,D5 | 36 | F | Invasive ductal carcinoma | II | T3N1M0 | - | - | - | - | ++, 15% | - | +~+++, 5% |
| C6,D6 | 66 | F | Invasive ductal carcinoma | II~III | T2N0M0 | ++, 5% | +++, 80% | +, 5% | + - | - | - | ++, 5% |
| C7,D7 | 50 | F | Invasive ductal carcinoma | II~III | T2N0M0 | ++, 10% | +++, 80% | ++, 20% | - | - | - | ++, 5% |
| C8,D8 | 66 | F | Invasive ductal carcinoma | III | T2N1M0 | +, 5% | +++, 80% | - | - | - | - | - |
| C9,D9 | 61 | F | Invasive papillary carcinoma | I~II | T3N0M0 | ++, 20% | +++, 60% | +++, 50% | +~+ + | - | +++ | +~+++, 5% |
| C10,D10 | 57 | F | Invasive ductal carcinoma | II~III | T2N1M0 | - | +++, 100% | ++, 5% | + - | - | - | +, 2% |
| C11,D11 | 60 | F | Invasive ductal carcinoma | II~III | T2N0M0 | - | +~+++, 60% | - | - | - | - | ++, 2% |
| C12,D12 | 56 | F | Sarcoma | | T2N0M0 | - | - | - | - | ++, 20% | ++ | + - |
| C13,D13 | 33 | F | Ductal carcinoma in situ | I | TisNOM0 | - | - | - | +++ | +, 2% | +~+++ | +, 5% |
| C14,D14 | 40 | F | Invasive ductal carcinoma | II | T4N2Mx | +, 5% | +, 5% | +~+++, 60% | +++ | ++, 30% | - | ++, 15% |
| C15,D15 | 34 | F | Ductal carcinoma in situ | I | TisNOM0 | - | - | - | +++ | ++, 20% | - | ++, 10% |
| E1,F1 | 40 | F | Invasive ductal carcinoma | II | T2N0M0 | +, 5% | - | - | +++ | ++, 50% | - | +~+++, 10% |
| E2,F2 | 50 | F | Invasive ductal carcinoma | II~III | T2N0M0 | +, 5% | - | - | +++ | ++, 2% | - | +~+++, 20% |
| E3,F3 | 44 | F | Invasive ductal carcinoma | II | T2N0M0 | - | - | - | - | +~+++, 50% | ++* | +~+++, 50% |
| E4,F4 | 58 | F | Invasive ductal carcinoma | II | T2N0M0 | - | +~+++, 50% | +, 2% | + - | - | - | +~+++, 5% |
| E5,F5 | 37 | F | Invasive ductal carcinoma | III | T4N1M0 | - | - | - | - | +++, 95% | ++* | ++, 60% |
| E6,F6 | 61 | F | Invasive ductal carcinoma | II~III | T4N0M0 | +, 2% | +++, 60% | ++, 20% | + | - | - | ++, 5% |
| E7,F7 | 41 | F | Invasive ductal carcinoma | I | T2N0M0 | +, 2% | - | - | +++ | +~+++, 2% | - | ++, 5% |
| E8,F8 | 28 | F | Invasive ductal carcinoma | II | T2N0M0 | +, 5% | +++, 80% | - | + | - | - | ++, 5% |
| E9,F9 | 30 | F | Invasive ductal carcinoma | II~III | T2N2M0 | +, 5% | +, 30% | ++, 10% | +++ | +~+++, 60% | - | +++*, 50% |
| E10,F10 | 52 | F | Invasive ductal carcinoma | III | T2N0M0 | - | - | - | - | - | +++* | +++, 80% |
| E11,F11 | 48 | F | Invasive ductal carcinoma | III | T2N0M0 | - | +++, 80% | +, 5% | + | + - | - | +++, 80% |
| E12,F12 | 43 | F | Invasive ductal carcinoma | II | T2N2M0 | +, 5% | ++, 30% | - | +++ | ++, 15% | - | +++, 30% |
| E13,F13 | 46 | F | Invasive ductal carcinoma | II~III | T2N0M0 | - | - | - | ++ | - | + | +~+++, 60% |
| E14,F14 | 68 | F | Invasive papillary carcinoma | I~II | T2N0M0 | +~+++, 50% | +++, 100% | +++, 80% | + | - | - | +++, 5% |
| E15,F15 | 49 | F | Invasive ductal carcinoma | II~III | T2N0M0 | - | - | - | - | - | - | +~+++, 10% |
| G1,H1 | 51 | F | Invasive ductal carcinoma | II~III | T2N0M0 | - | +, 10% | +~+++, 5% | +++ | - | - | +~+++, 60% |
| G2,H2 | 45 | F | Invasive ductal carcinoma | II~III | T2N0M0 | +, 5% | +++, 80% | - | + | - | - | +~+++, 50% |
| G3,H3 | 30 | F | Invasive ductal carcinoma | III | T2N0M0 | +~+++, 20% | +~+++, 80% | +++, 60% | - | +++*, 80% | +~+++ | +~+++, 30% |
| G4,H4 | 54 | F | Invasive ductal | II | T2N0M0 | +~+++ | - | - | - | ++ | ++* | +++ |



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|---------|----|---|----------------------------|--------|--------|---------------|---------------|---------------|------|--------------|--------|---------------|
| | | | carcinoma | | | +, 30% | | | | 20% | | 5% |
| G5,H5 | 60 | F | Invasive ductal carcinoma | II | T2N0M0 | +, 2% | +++ 90% | +, 10% | - | - | - | +++ 5% |
| G6,H6 | 44 | F | Invasive lobular carcinoma | II~III | T2N0M0 | - | +, 60% | +++ 80% | - | - | - | ++ 2% |
| G7,H7 | 38 | F | Invasive ductal carcinoma | II~III | T2N2M0 | - | ++~+++ 80% | - | +- | - | - | +++ 20% |
| G8,H8 | 43 | F | Invasive ductal carcinoma | II | T2N0M0 | - | ++ 60% | - | - | - | - | ++ 2% |
| G9,H9 | 42 | F | Invasive ductal carcinoma | II~III | T2N0M0 | +, 5% | +~+++ 50% | ++ 60% | + | - | - | ++~+++ 5% |
| G10,H10 | 55 | F | Invasive ductal carcinoma | II | T2N0M0 | - | - | - | +++ | +~+++ 20% | - | ++~+++ 10% |
| G11,H11 | 49 | F | Invasive ductal carcinoma | II~III | T2N0M0 | ++~+++ 80% | +++ 100% | ++~+++ 20% | + | - | - | ++~+++ 15% |
| G12,H12 | 41 | F | Invasive ductal carcinoma | I~II | T3N0M0 | - | - | - | +++ | - | - | ++~+++ 20% |
| G13,H13 | 41 | F | Colloid carcinoma | II | T3N0M0 | +, 5% | ++ 50% | ++~+++ 15% | + | - | - | ++~+++ 5% |
| G14,H14 | 41 | F | Invasive ductal carcinoma | II~III | T2N0M0 | - | - | - | +++ | - | +~+++ | ++~+++ 30% |
| G15,H15 | 46 | F | Invasive ductal carcinoma | II~III | T4N0M0 | - | ++ 50% | - | - | - | - | ++~+++ 5% |
| I1,J1 | 68 | F | Invasive ductal carcinoma | II~III | T4N0M0 | - | +++ 80% | ++~+++ 20% | - | - | - | +++ 5% |
| I2,J2 | 49 | F | Invasive ductal carcinoma | II~III | T2N0M0 | +, 2% | ++~+++ 80% | - | + | - | - | +++ 8% |
| I3,J3 | 55 | F | Invasive ductal carcinoma | II | T2N0M0 | +, 5% | +++ 100% | ++~+++ 50% | - | +~+++ 15% | - | +++ 8% |
| I4,J4 | 44 | F | Invasive ductal carcinoma | II~III | T4N3Mx | - | - | - | +++ | ++ 15% | - | +++ 8% |
| I5,J5 | 60 | F | Invasive ductal carcinoma | II | T2N0M0 | - | - | - | +++ | - | - | ++~+++ 10% |
| I6,J6 | 43 | F | Invasive ductal carcinoma | I~II | T3N0M0 | +, 5% | ++~+++ 60% | +++ 60% | - | - | - | ++~+++ 2% |
| I7,J7 | 44 | F | Invasive ductal carcinoma | II~III | T3N0M0 | +, 2% | ++~+++ 80% | ++~+++ 50% | - | - | - | ++~+++ 5% |
| I8,J8 | 42 | F | Invasive ductal carcinoma | II~III | T4N2M0 | +, 5% | ++~+++ 60% | +~+++ 20% | - | - | + | ++ 5% |
| I9,J9 | 41 | F | Invasive ductal carcinoma | II~III | T3N0M0 | +, 2% | +, 20% | ++ 50% | - | - | - | ++ 5% |
| I10,J10 | 56 | F | Invasive ductal carcinoma | II~III | T2N0M0 | - | ++~+++ 60% | +, 10% | - | - | - | +++ 30% |
| I11,J11 | 79 | F | Invasive ductal carcinoma | II | T2N0M0 | +, 20% | - | - | - | ++ 20% | ++~+++ | +++ 10% |
| I12,J12 | 57 | F | Invasive ductal carcinoma | II | T3N0M0 | +, 5% | - | - | +++ | ++ 2% | - | ++ 5% |
| I13,J13 | 54 | F | Invasive lobular carcinoma | III | T4N3M1 | - | +++ 80% | - | - | +, 10% | - | +++ 10% |
| I14,J14 | 33 | F | Invasive ductal carcinoma | II | T4N2M0 | - | - | - | +++~ | - | - | ++~+++ 10% |
| I15,J15 | 42 | F | Invasive ductal carcinoma | II~III | T2N0M0 | +~+++ 5% | +, 10% | +~+++ 5% | ++ | - | - | ++~+++ 10% |

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)