

## Pax-5 is a potent regulator of E-cadherin and breast cancer malignant processes

### SUPPLEMENTARY TABLES

**Supplementary Table 1: Cell line models**

Cells	Source	Pathology	Breast gene profile	Breast subtype
HEK293	human, fetal embryonic kidney	non-cancerous embryonic kidney	N/A	N/A
REH	human lymphocyte	acute lymphocytic leukemia (non-T; non-B)	N/A	N/A
Nalm-6	human lymphocyte	leukemia	N/A	N/A
MB415	human breast; derived from pleural effusion	adenocarcinoma	ER+/PR-	luminal
MB436	human breast; derived from pleural effusion	invasive ductal carcinoma	ER-/PR-	basal B
MB468	human breast; derived from pleural effusion	adenocarcinoma	ER-/PR-	basal A
BT474	human primary breast	invasive ductal carcinoma	ER+/PR+/HER2	luminal
BT549	human primary breast	invasive ductal carcinoma	ER-/PR-	basal B
HCC1954	human primary breast	ductal carcinoma	ER-/PR-/HER2	basal A
MCF7	human breast; derived from pleural effusion	invasive ductal carcinoma	ER+/PR+	luminal
MB231	human breast; derived from pleural effusion	adenocarcinoma	ER-/PR-	basal B
T47D	human breast; derived from pleural effusion	invasive ductal carcinoma	ER+/PR+	luminal
MCF12A	human primary breast	non-cancerous from fibrocystic disease	ER-/PR-	basal B
MCF10A	human primary breast	non-cancerous from fibrocystic disease	ER-/PR-	basal B

Abbreviations: ER, estrogen receptor; PR, progesterone receptor; HER2, human epidermal growth factor receptor 2; ER/PR positivity, HER2 overexpression status are indicated. Cell line and expression data are derived from Neve et al. 2006. [28]

Supplementary Table 2: Pax-5 protein expression in FFPE tissue arrays

Type/Pathology *	Number (%) of Pax-5 expressing breast tissues and Scoring **				Total ***
	Score 0	Score 1	Score 2	Score 3	
Normal Breast Tissue	1 (7%)	1 (7%)	9 (64%)	3 (21%)	14
Cancer adjacent normal breast tissue	3 (27%)	4 (36%)	1 (9%)	3 (27%)	11
Hyperplasia	-	5 (25%)	11 (55%)	4 (20%)	20
Benign (fibroadenosis, fibroadenoma)	-	9 (28%)	18 (56%)	5 (16%)	32
Apocrine carcinoma + Carcinosarcoma	-	4 (67%)	2 (33%)	-	6
Cysto/sarcoma phyllodes	-	1 (6%)	15 (83%)	2 (11%)	18
Invasive ductal carcinoma	-	29 (23%)	80 (63%)	18 (14%)	127
Invasive lobular carcinoma	-	2 (25%)	2 (25%)	4 (50%)	8
Medullary carcinoma	-	3 (14%)	10 (45%)	9 (41%)	22
<b>Malignant</b> Mixed lobular and ductal carcinoma	-	-	2 (100%)	-	2
Mucinous adenocarcinoma	3 (14%)	7 (32%)	12 (55%)	-	22
Neuroendocrine carcinoma	-	-	2 (100%)	-	2
Tubular carcinoma	1 (17%)	1 (17%)	4 (67%)	-	6
Paget's disease	-	2 (25%)	5 (63%)	1 (13%)	8
DCIS + Intraductal carcinoma	-	2 (25%)	6 (75%)	-	8
<b>Total</b>	8 (3%)	70 (22%)	179 (58%)	49 (16%)	306 (100%)

\* As diagnosed by pathologists at Tissue Array Networks; DCIS = Ductal Carcinoma *In Situ*

\*\* Score 0 = No expression, Score 1 = weak, Score 2 = moderate, Score 3 = strong

\*\*\* Total number of duplicate samples from T082, BRC961, BR961 and BR1006 TMAs

Abbreviation: DCIS = Ductal Carcinoma *in situ*

Supplementary Table 3: PCR primers

	Forward primers (5'→3')	Reverse primers (5'→3')
<b>HPRT</b>	TGA CAC TGG CAA AAC AAT GCA	GGT CTT TTT CAC CGA CAA GCT
<b>Pax-5<math>\alpha</math></b>	GCG CAA GAG AGA CGA AGG T	CTG CTG CTG TGT GAA CAA GTC
<b>Pax-5<math>\beta</math></b>	TTG GCA CGA GGT AGA CAC	AGC CCT CCA ACA CTG AGA
<b>Pax-5 (EMSA)</b>	Biotin-GAA TGG GGC ACT GAG GCG TG	Biotin-CAC GCC TCA GTG CCC CAT TC
<b>Ecad (EMSA)</b>	Biotin-CTT CAG CCC AGG AGT TC	Biotin-CGG TGG CTC ACT AAG AC
<b>CD19</b>	CCA CCT GGA GAT CAC TG	ATA AGC CAA AGT CAC AGC
<b>MMP2</b>	GCG GCG GTC ACA GCT ACT	GAC GCT CTT GAG ACT TTG
<b>MMP9</b>	GTG CTG GGC TGC TGC TTT GCT G	TTT CGA CTC TCC ACG GAT CTC T
<b>Vimentin</b>	CAA CCT GGC CGA GGA CAT	ACG CAT TGT CAA CAT CCT GTC T
<b>Fibronectine</b>	CCG CCG AAT GTA GGA CAA GA	TGC CAA CAG GAT GAC ATG AAA
<b>E-cadherin</b>	CAA GCT ATC CTT GCA CCT CAG	GCA TCA AGA GAA CTC CTA TCT TG
<b>Zeb-1</b>	GCC AAT AAG CAA ACG ATT CTG	TTT GGC TGG ATC ACT TTC AAG
<b>Snail</b>	GCT GCA GGA CTC TAA TCC AGA GTT	GAC AGA GTC CCA GAT GAG CAT TG
<b>Slug</b>	GCA GTG AGG GCA AGA AAAAG	GCG ATG CCC AGT CTA GAA AA
<b>Twist</b>	GGA GTC CGC AGT CTT ACG AG	TCT GGA CCT GGT AGA GG