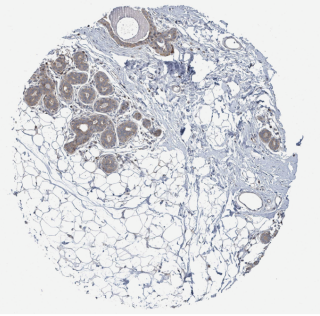


Supplementary Figure 1

A Normal

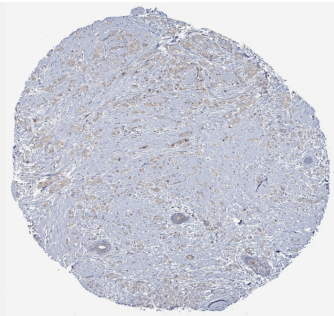
FAM171A1

Breast	
HPA051345	
Female, age 45	Breast (T-04000)
Normal tissue, NOS	(M-00100)
Patient id: 3544	
Adipocytes	
Staining: Not detected	
Intensity: Negative	Quantity: None
Location: None	
Glandular cells	
Staining: Medium	
Intensity: Moderate	Quantity: >75%
Location: Cytoplasmic membranous	
Myoepithelial cells	
Staining: Medium	
Intensity: Moderate	Quantity: >75%
Location: Cytoplasmic membranous	



Cancer

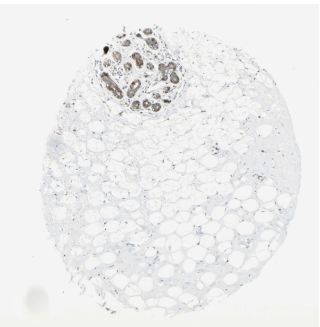
Breast cancer	
HPA051345	
Female, age 73	Breast (T-04000)
Duct carcinoma (M-85003)	
Patient id: 2115	
Tumor cells	
Staining: Low	
Intensity: Weak	Quantity: 75%-25%
Location: Cytoplasmic membranous	



B Normal

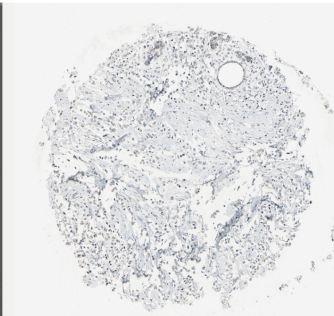
NDFIP1

Breast	
HPA09682	
Female, age 23	Breast (T-04000)
Normal tissue, NOS	(M-00100)
Patient id: 2773	
Adipocytes	
Staining: Not detected	
Intensity: Negative	Quantity: None
Location: None	
Glandular cells	
Staining: Medium	
Intensity: Moderate	Quantity: >75%
Location: Cytoplasmic membranous	
Myoepithelial cells	
Staining: High	
Intensity: Strong	Quantity: >75%
Location: Cytoplasmic membranous	



Cancer

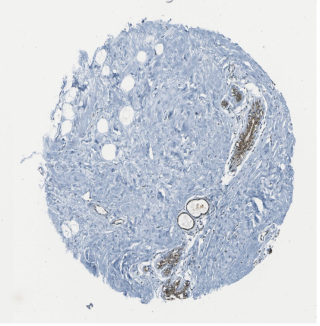
Breast cancer	
HPA09682	
Female, age 51	Breast (T-04000)
Lobular carcinoma (M-85203)	
Patient id: 2083	
Tumor cells	
Staining: Low	
Intensity: Weak	Quantity: 75%-25%
Location: Cytoplasmic membranous	



C Normal

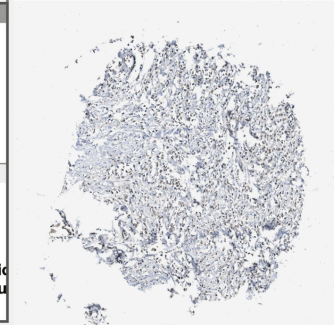
SKP1

Breast	
CAB012982	
Female, age 23	Breast (T-04000)
Normal tissue, NOS	(M-00100)
Patient id: 2773	
Adipocytes	
Staining: Low	
Intensity: Weak	Quantity: 75%-25%
Location: Nuclear	
Glandular cells	
Staining: High	
Intensity: Strong	Quantity: >75%
Location: Cytoplasmic membranous nuclear	
Myoepithelial cells	
Staining: Medium	
Intensity: Moderate	Quantity: >75%
Location: Cytoplasmic membranous nuclear	



Cancer

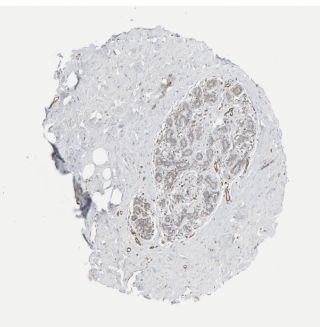
Breast cancer	
CAB012982	
Female, age 51	Breast (T-04000)
Lobular carcinoma (M-85203)	
Patient id: 2083	
Tumor cells	
Staining: Low	
Intensity: Weak	Quantity: >75%
Location: Cytoplasmic membranous nuclear	



D Normal

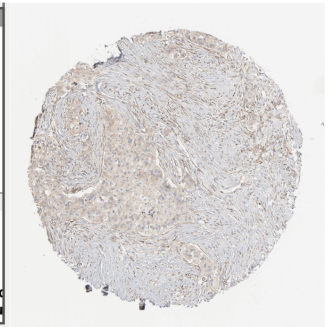
REEP5

Breast	
HPA03895	
Female, age 23	Breast (T-04000)
Normal tissue, NOS	(M-00100)
Patient id: 2773	
Adipocytes	
Staining: Not detected	
Intensity: Negative	Quantity: None
Location: None	
Glandular cells	
Staining: Low	
Intensity: Weak	Quantity: 75%-25%
Location: Cytoplasmic membranous	
Myoepithelial cells	
Staining: Not detected	
Intensity: Negative	Quantity: None
Location: None	

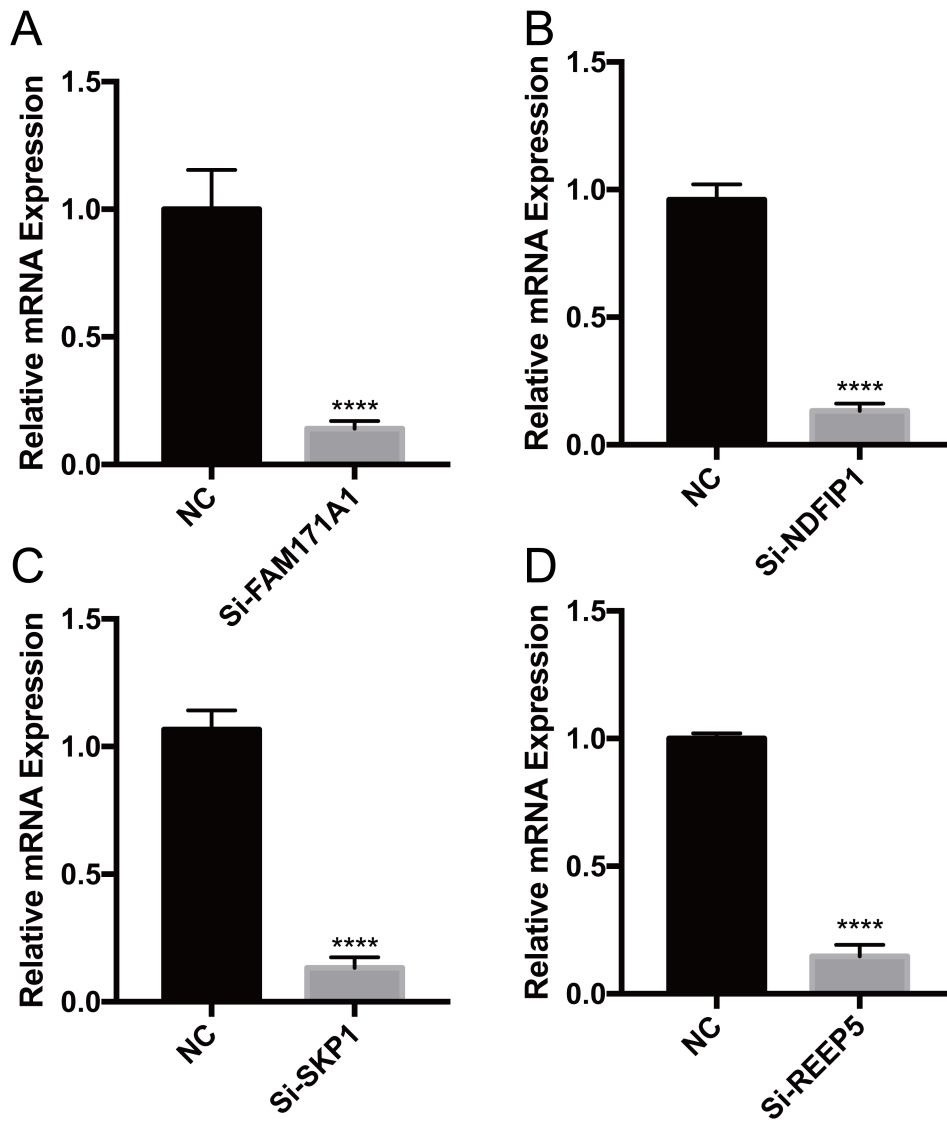


Cancer

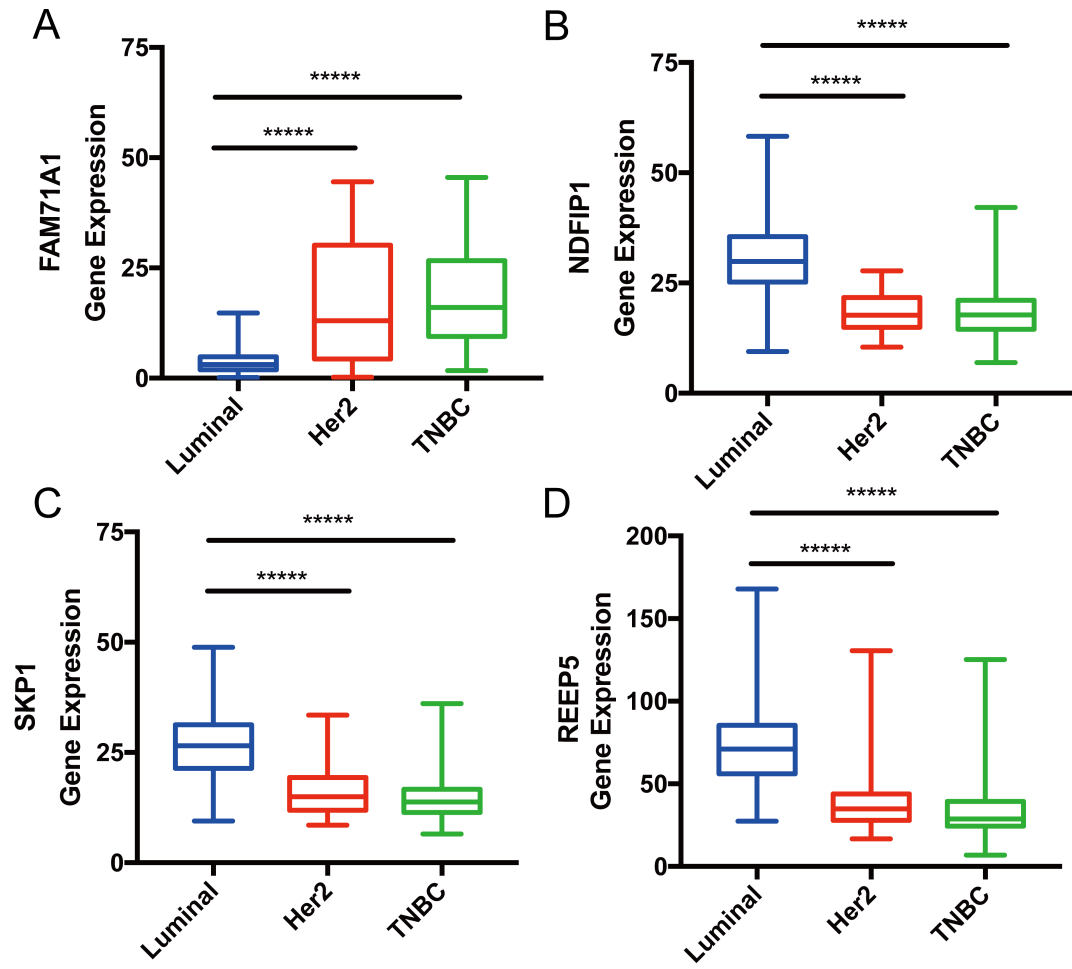
Breast cancer	
HPA03895	
Female, age 49	Breast (T-04000)
Duct carcinoma (M-85003)	
Normal tissue, NOS	(M-00100)
Patient id: 2015	
Tumor cells	
Staining: Low	
Intensity: Weak	Quantity: >75%
Location: Cytoplasmic membranous	



Supplementary Figure 2

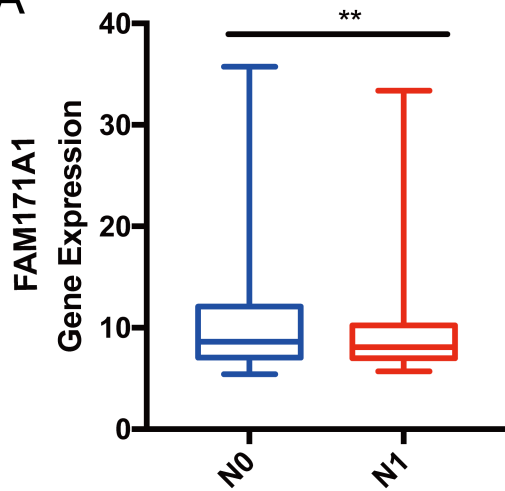


Supplementary Figure 3

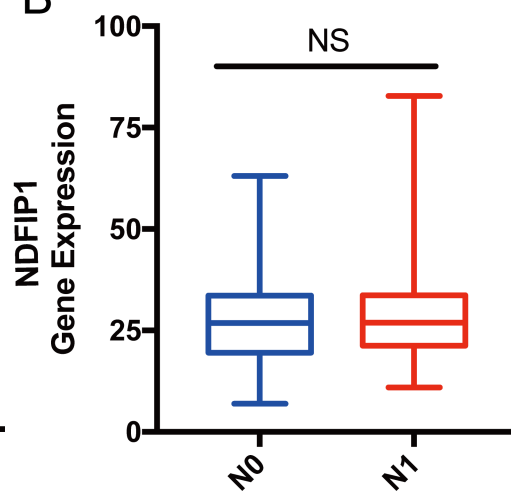


Supplementary Figure 4

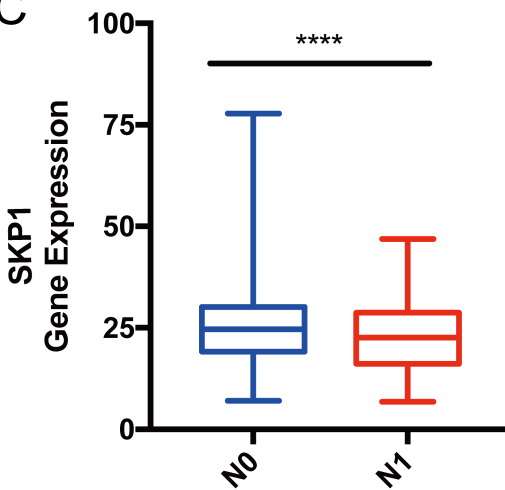
A



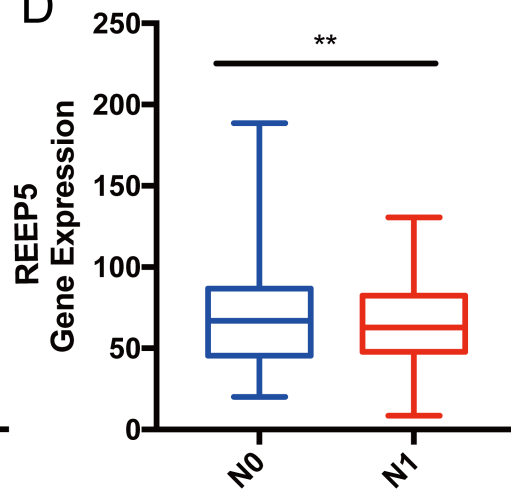
B



C



D



Supplementary Table 1.

Statistics of clinical features and molecular characteristics

Clinical features and molecular characteristics (cases)		
ERα	+	25
	-	15
PR	+	21
	-	19
HER2	+	22
	-	18
Lymph node metastasis	+	20
	-	20
Pathological grade	Low	1
	Medium	24
	High	15

Supplementary Table 2. Primer sequences used to amplify target genes in human by real-time RT-PCR.

Target Gene	Primer Sequence
FAM171A1	
forward	5'- GCAGATGCGCTCATCGAGAT-3'
reverse	5'- GCCCAGCTTATACTGGAACTTG-3'
NDFIP1	
forward	5'- TACAACACTGCCAGTTATGATG -3'
reverse	5'- ATCCCGACCCACAAAATCCTC-3'
SKP1	
forward	5'- GACCATGTTGGAAGATTTGGGA-3'
reverse	5'- TGCACCACTGAATGACCTTTT-3'
REEP5	
forward	5'- AAGAACTGCATGACTGACCTTC-3'
reverse	5'- GAGGCTCCATAACCGAACACC-3'
CIRBP	
forward	5'- AGGGCTGAGTTTTGACACCAA-3'
reverse	5'- ACAAACCCAAATCCCCGAGAT-3'
BTF3	
forward	5'- CCAAGGAACAGTGATCCACTTT-3'
reverse	5'- AGCTGCTTTGTCTCAGCATGG-3'
TBC1D9	
forward	5'- CTGTGGATCACCGAGAGGG-3'
reverse	5'- ACAGGCGATGGTCCAGTAGA-3'
GAPDH	
forward	5'-GAAGGTGAAGGTCGGAGTC-3'
reverse	5'-GAAGATGGTGATGGGATTTC-3'