

Table S1. Description of the cohort of BC patients.

		Median age (min-max)	Primary Tumor	Molecular Subtype	Menopausal Status	Distant metastasis Site at Diagnosis
Healthy Donors		57 (46-65)	N/A	N/A	N/A	N/A
	Donor 1	62	N/A	N/A	N/A	N/A
	Donor 2	58	N/A	N/A	N/A	N/A
	Donor 3	57	N/A	N/A	N/A	N/A
	Donor 4	48	N/A	N/A	N/A	N/A
	Donor 5	62	N/A	N/A	N/A	N/A
	Donor 6	46	N/A	N/A	N/A	N/A
	Donor 7	56	N/A	N/A	N/A	N/A
	Donor 8	65	N/A	N/A	N/A	N/A
	Donor 9	56	N/A	N/A	N/A	N/A
	Donor 10	51	N/A	N/A	N/A	N/A
	Donor 11	64	N/A	N/A	N/A	N/A
	Donor 12	57	N/A	N/A	N/A	N/A
Stage I BC patients		64 (45-71)	T1	Luminal- like		N/A
	Patient 1	45	T1	Luminal B-like	Premenopau sal	N/A
	Patient 2	61	T1	Luminal B-like	Postmenopa usal	N/A
	Patient 3	66	T1	Luminal B-like	Postmenopa usal	N/A
	Patient 4	68	T1	Luminal A-like	Postmenopa usal	N/A
	Patient5	71	T1	Luminal A-like	Postmenopa usal	N/A
	Patient 6	69	T1	Luminal B-like	Postmenopa usal	N/A
	Patient 7	68	T1	Luminal B-like	Postmenopa usal	N/A
	Patient 8	68	T1	Luminal B-like	Postmenopa usal	N/A
	Patient 9	67	T1	Luminal B-like	Postmenopa usal	N/A
	Patient 10	63	T1	Luminal B-like	Postmenopa usal	N/A
	Patient 11	61	T1	Luminal A-like	Postmenopa usal	N/A
	Patient 12	56	T1	Luminal A-like	Postmenopa usal	N/A
	Stage IV BC patients		55 (41-71)		Luminal- like	
Patient 1		59	T3	Luminal B-like	Postmenopa usal	Bone
Patient 2		52	N/A	Luminal A-like	Postmenopa usal	Bone
Patient 3		64	N/A	Luminal B-like	Postmenopa usal	Lung, Bone, Brain
Patient 4		71	N/A	Luminal B-like	Postmenopa usal	Bone, Liver, Lung
Patient 5		51	T2	Luminal B-like	N/A	Skin, Lung, Bone
Patient 6		57	T3	Luminal B-like	Premenopau sal	Bone

Patient 7	53	N/A	Luminal B-like	Postmenopausal	Bone
Patient 8	51	N/A	Luminal B-like	Premenopausal	Bone
Patient 9	44	T3	Luminal A-like	Premenopausal	Bone, Lung
Patient 10	56	T4	Luminal B-like	Postmenopausal	Bone, Liver, Skin
Patient 11	58	T4	Luminal A-like	Postmenopausal	Bone
Patient 12	41	T3	Luminal A-like	Premenopausal	Bone

N/A – Not applicable/available

Table S2. Protein abundance ratio comparison between ISO treated MDA-231 and control MDA-231 samples

Gene Symbol	Abundance Ratio (ISOvsCTRL)	P value
<i>CDH6</i>	100	3,4E-16
<i>MCFD2</i>	100	3,4E-16
<i>IGFBP1</i>	2,976	3,4E-16
<i>ALDOB</i>	2,802	3,4E-16
<i>MAN2B1</i>	2,976	3,4E-16
<i>STC1</i>	2,652	3,4E-16
<i>PLAU</i>	2,568	3,4E-16
<i>ABCA10</i>	2,239	7,16E-12
<i>VNN1</i>	2,084	6,54E-10
<i>FABP1</i>	1,993	8,52E-09
<i>TARS1</i>	1,923	6,06E-08
<i>BRD9</i>	1,878	2,23E-07
<i>IGFBP4</i>	1,866	3E-07
<i>PTK2B</i>	1,754	4,9E-06
<i>WASHC4</i>	1,727	9,58E-06
<i>PRC1</i>	1,605	0,000169
<i>CLU</i>	1,596	0,000213
<i>SERPINB4</i>	1,566	0,000425
<i>CTSL</i>	1,508	0,001531
<i>TPR</i>	1,467	0,003897
<i>HOOK3</i>	1,466	0,00398
<i>DDX39A</i>	1,451	0,00539
<i>CTSD</i>	1,447	0,005945
<i>C6</i>	1,391	0,018738
<i>PLAUR</i>	1,382	0,02224
<i>H2BC21</i>	1,365	0,028902
<i>SRGN</i>	1,347	0,03991
<i>IGFBP7</i>	1,331	0,053154
<i>GSTO1</i>	0,01	3,4E-16
<i>PBX4</i>	0,01	3,4E-16
<i>NCAN</i>	0,035	3,4E-16
<i>CPPED1</i>	0,288	3,4E-16
<i>SLC25A13</i>	0,341	3,4E-16
<i>TTN</i>	0,386	3,4E-16
<i>DSC1</i>	0,404	6,42E-15
<i>KRT10</i>	0,52	5,62E-08
<i>KRT9</i>	0,534	2,23E-07
<i>LMNA</i>	0,56	1,95E-06
<i>SERPINE1</i>	0,588	1,76E-05
<i>IGFN1</i>	0,588	1,76E-05
<i>KRT1</i>	0,609	7,89E-05
<i>MMP1</i>	0,611	9,14E-05
<i>NPM1</i>	0,636	0,000337
<i>CENPE</i>	0,639	0,000404
<i>MAN2A1</i>	0,643	0,000495
<i>KISS1</i>	0,644	0,000527
<i>CCN2</i>	0,646	0,000604
<i>ANXA2</i>	0,654	0,000862
<i>ARHGDIA</i>	0,666	0,001608
<i>COL6A2</i>	0,677	0,002907
<i>FBP1</i>	0,679	0,003171
<i>VIM</i>	0,703	0,009364
<i>EIF5A1</i>	0,708	0,011596
<i>KRT14</i>	0,718	0,016761
<i>ADH5</i>	0,723	0,020352
<i>ATP5F1A</i>	0,729	0,025211
<i>TERT</i>	0,731	0,02716

<i>ANPEP</i>	0,739	0,03368
<i>GOT1</i>	0,739	0,03429
<i>AKAP13</i>	0,741	0,035427
<i>HADHB</i>	0,741	0,03574
<i>COL9A1</i>	0,747	0,044673
<i>PLXNB2</i>	0,751	0,049436
<i>VPS45</i>	0,753	0,053683

Table S3. Protein abundance ratio comparison between ISO treated MDA-1833 and ISO treated MDA-231 samples.

Gene Symbol	Abundance Ratio (1833 ISO vs 231 ISO)	P value
VCP	100	2,91E-16
GSTO1	100	2,91E-16
SLC25A13	2,985	1,19E-11
DSC1	2,539	2,23E-08
PTX3	2,526	2,72E-08
PSAP	2,314	8,84E-07
KRT10	2,31	9,32E-07
VNN1	2,184	7,5E-06
MT1L	1,995	0,000141
KRT14	1,971	0,000142
PLVAP	1,956	0,000171
TPR	1,956	0,000173
RPL29	1,939	0,000221
ANPEP	1,921	0,000294
MCFD2	1,782	0,002194
PEPD	1,777	0,002374
DMBT1	1,753	0,003348
NACA	1,733	0,004404
KRT1	1,733	0,004408
LRRRC8A	1,693	0,007781
PLG	1,671	0,01031
CCN2	1,642	0,014896
GRN	1,64	0,015265
IGF2	1,627	0,017886
OPA1	1,624	0,018592
NPM1	1,601	0,024787
FKBP1A	1,593	0,027353
TTR	1,589	0,028658
CPPED1	1,563	0,038659
KRT9	1,551	0,045396
TMEM132C	1,548	0,04683
RCN1	0,737	0,050725
MYOM2	0,727	0,038623
IGFBP4	0,724	0,036342
IGFBP3	0,723	0,035024
HGD	0,72	0,032832
TIMP2	0,719	0,031821
C4BPA	0,719	0,03205
ITIH2	0,714	0,027865
HBB	0,714	0,028367
CD44	0,708	0,023916
HLA-A	0,701	0,019793
OAF	0,679	0,01009
TPM1	0,676	0,009081
CTSZ	0,665	0,006297
APP	0,659	0,005054
DDX39A	0,657	0,004593
TNC	0,637	0,002221
FBP1	0,627	0,00146
IGFBP7	0,585	0,000214
CST3	0,581	0,000174
PTK2B	0,58	0,00017
MMP1	0,568	0,000134
PIIB	0,546	3,84E-05
THBS2	0,545	3,74E-05
SPARC	0,496	1,29E-06
SERPINE1	0,493	1,06E-06

<i>STC1</i>	0,491	8,84E-07
<i>RNASET2</i>	0,457	5,2E-08
<i>VN1R5</i>	0,45	2,72E-08
<i>RPLP2</i>	0,442	1,37E-08
<i>IGFN1</i>	0,438	8,98E-09
<i>CTSL</i>	0,418	1,09E-09
<i>PLAUR</i>	0,332	6,37E-15
<i>IGFBP1</i>	0,267	2,91E-16
<i>LOX</i>	0,237	2,91E-16
<i>WASHC4</i>	0,206	2,91E-16
<i>SERPINB2</i>	0,01	2,91E-16
<i>SET</i>	0,01	2,91E-16