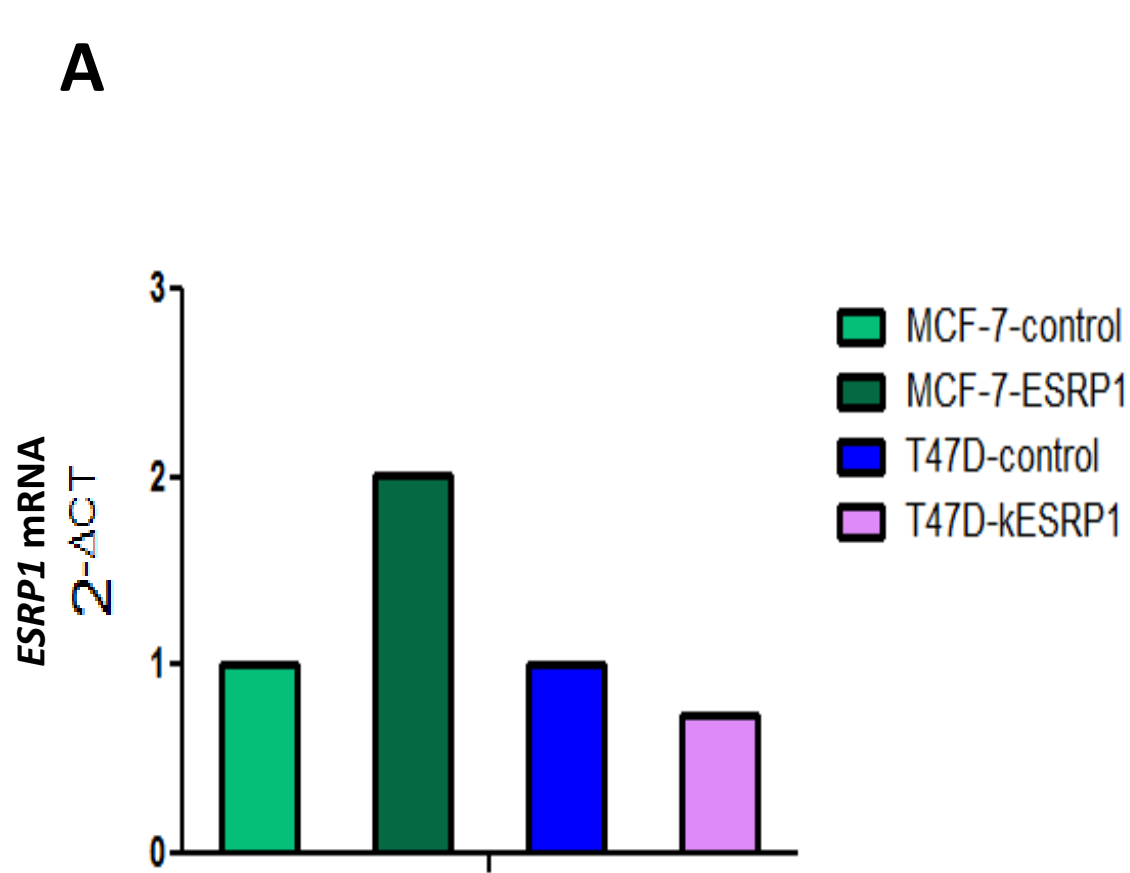


## Appendix Figures

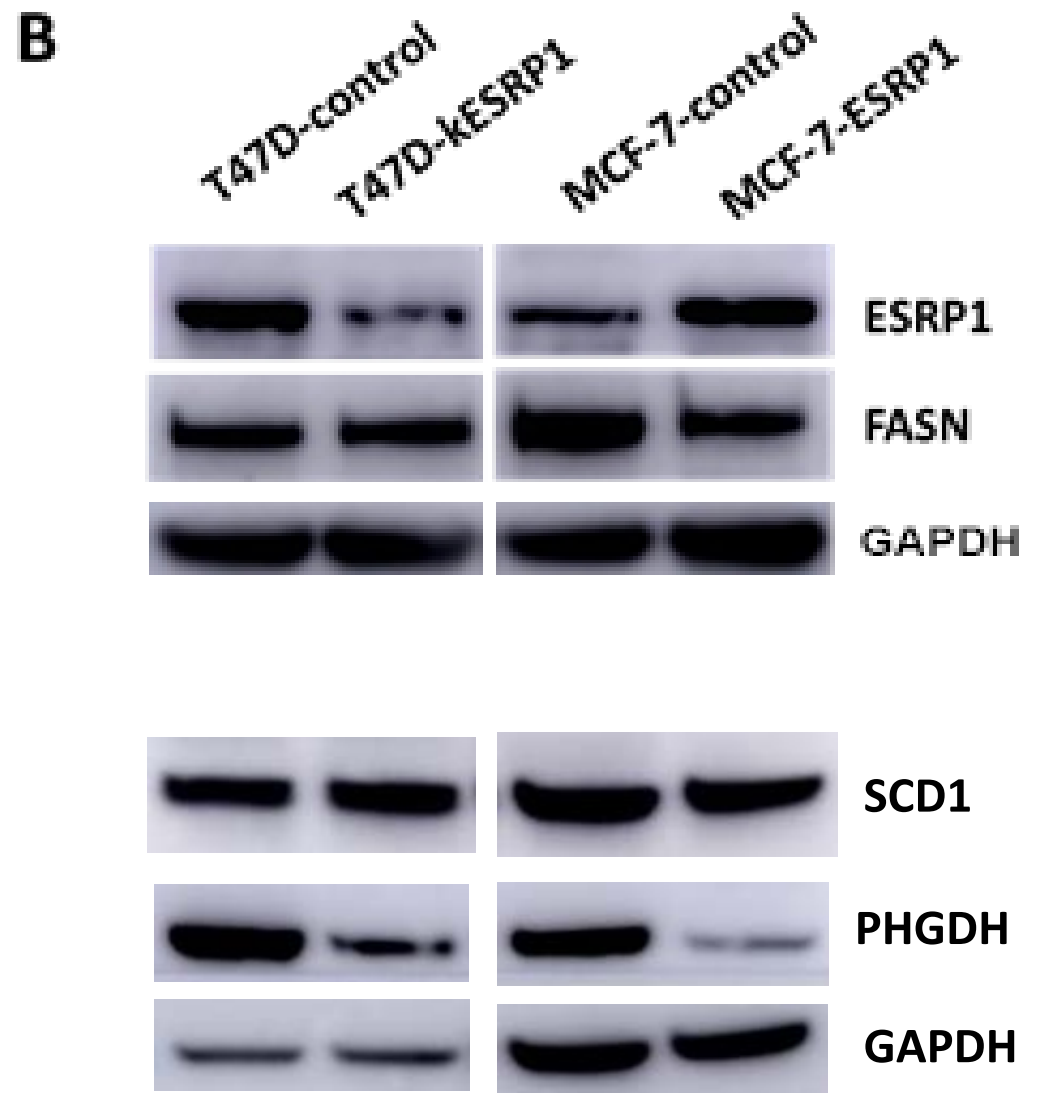
<b>Appendix Figure S1</b> .....	page 2
Expression analysis of <i>ESRP1</i> knockdown in T47D and overexpression of <i>ESRP1</i> in MCF-7 cells	
<b>Appendix Figure S2</b> .....	page 3
Functional assays of <i>ESRP1</i> knockdown cell lines	
<b>Appendix Figure S3</b> .....	page 4
Invasion Assay-comparison of <i>ESRP1</i> knockdown versus control cells	
<b>Appendix Figure S4</b> .....	page 5
CD44 splice variants in tamoxifen and fulvestrant resistant cell lines in response to <i>ESRP1</i> knockdown	
<b>Appendix Figure S5</b> .....	page 6
Structural Views of Alternative Splicing Events (ASEs) of key genes in LCC2- <i>ESRP1</i> (2C3) knockdown cells compared to LCC2 control (2-control) resistant cell lines using HTA analysis (TAC 4.0 software)	
<b>Appendix Figure S6</b> .....	page 7
Structural Views of Alternative Splicing Events (ASEs) of key genes in LCC9- <i>ESRP1</i> (9C2) knockdown cells compared to LCC9 control (9-control) resistant cell lines using HTA analysis (TAC 4.0 software)	
<b>Appendix Figure S7</b> .....	page 8
Evaluation of Glucose uptake and production of lactic acid	

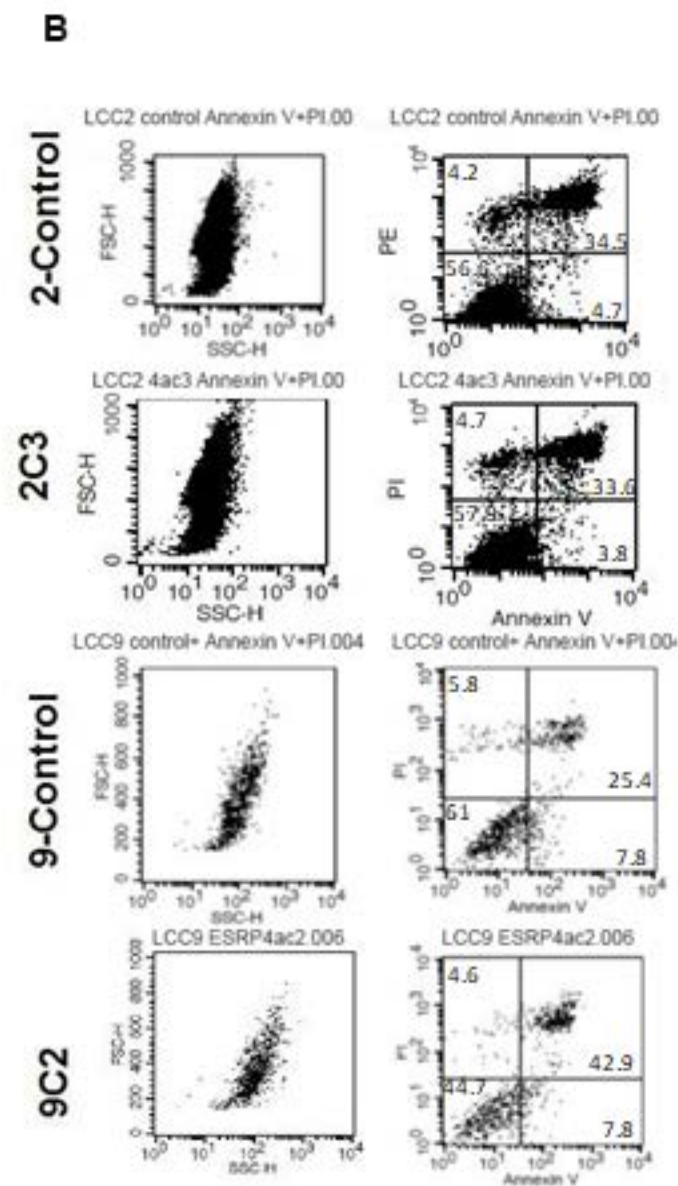
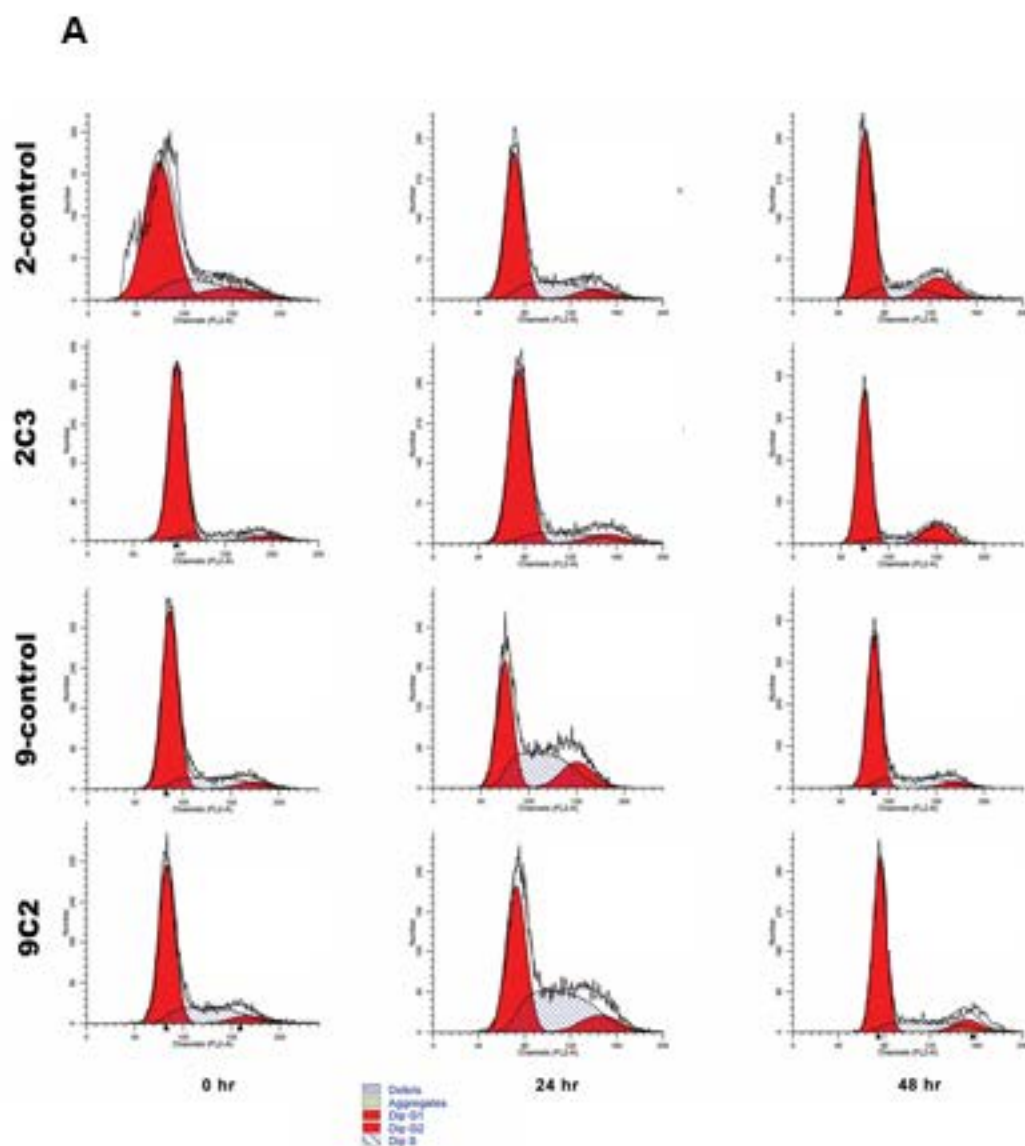


**Appendix Figure S1.** Expression analysis of *ESRP1* knockdown in T47D and overexpression of *ESRP1* in MCF-7 cells. MCF-7 set: MCF-7 control (vector only) and MCF-7-*ESRP1* (MCF-7 overexpressing *ESRP1* construct); T47D set: T47D-control (pLKO.1 control vector only) and T47D knockdown construct -T47D-kESRP1 (T47D with shRNA *ESRP1* vector).

**A** qRT-PCR assay (see details in Materials and Methods).

**B** Western blot analysis of the indicated antibodies (see details in Materials and Methods).





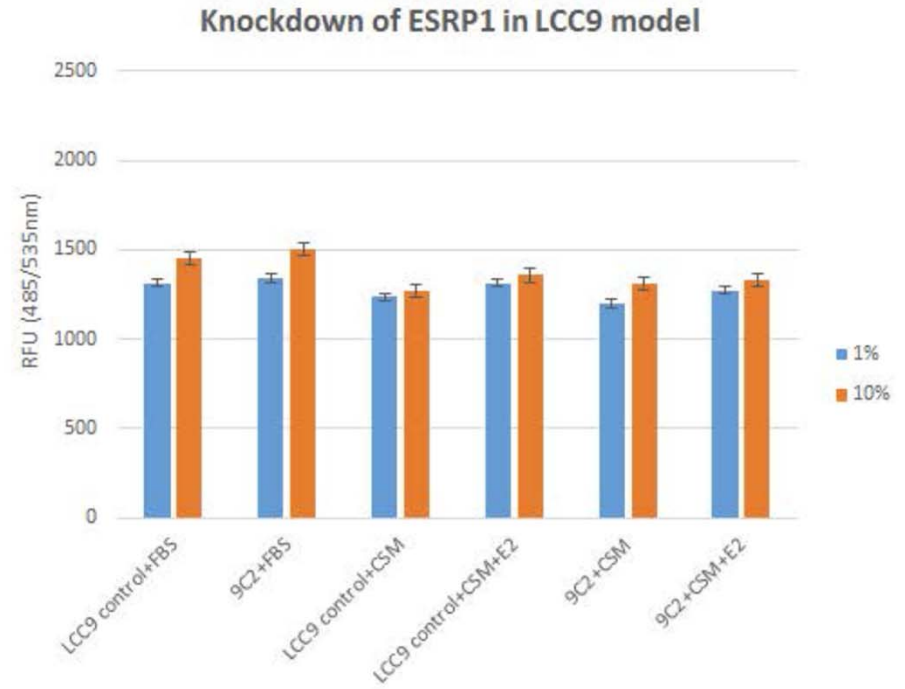
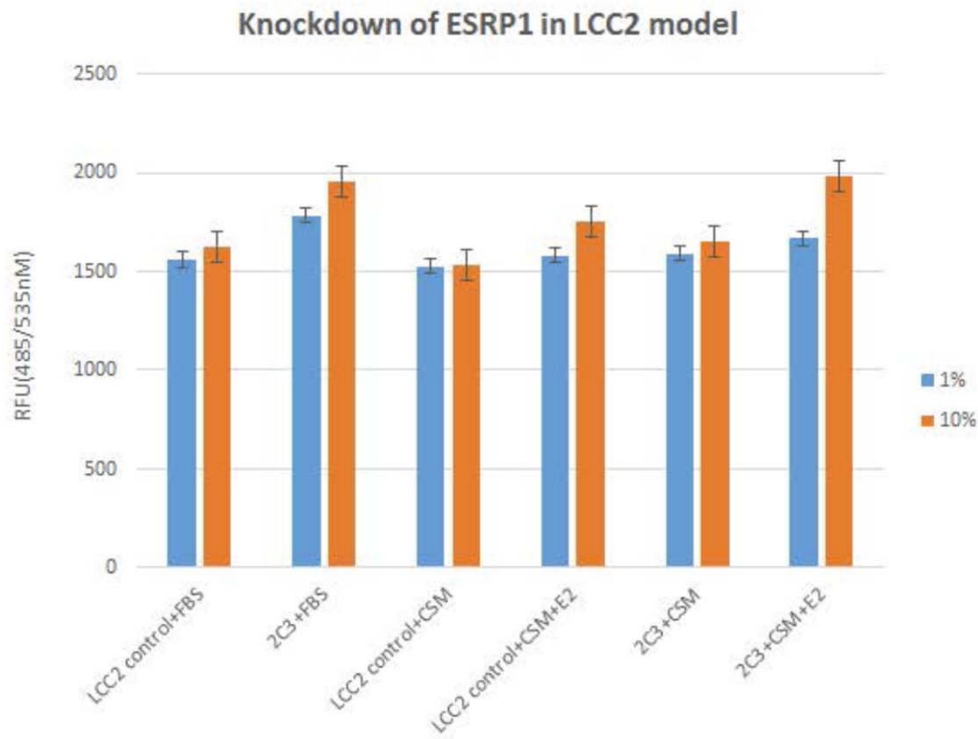
**Appendix Figure S2. Functional assays of ESRP1 knockdown cell lines.**

**A** Cell cycle

**B** Apoptosis. The numbers show the percentages of cells in each quadrant ( LL-lower left: intact cells; LR-lower right: early apoptotic cells; UL-Upper left: necrotic cells; UR-Upper right: late apoptotic or necrotic cells)

(See details in Appendix Methods).

## Invasion Assay

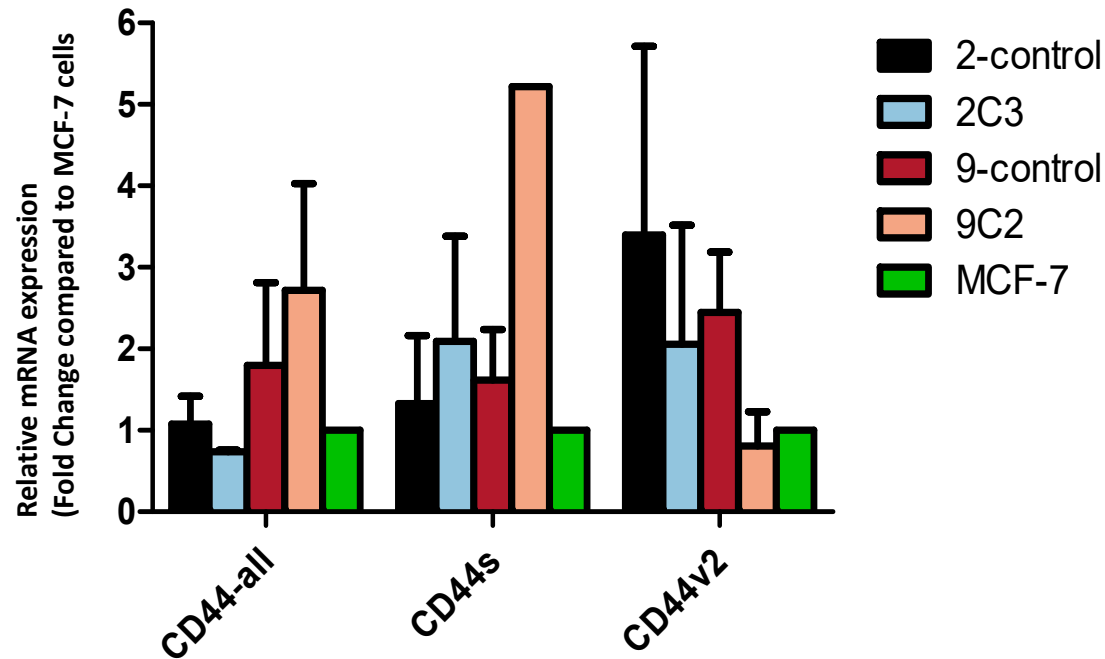


**Appendix Figure S3.** Invasion Assay-comparison of *ESRP1* knockdown versus control cells.

**A** LCC2 model

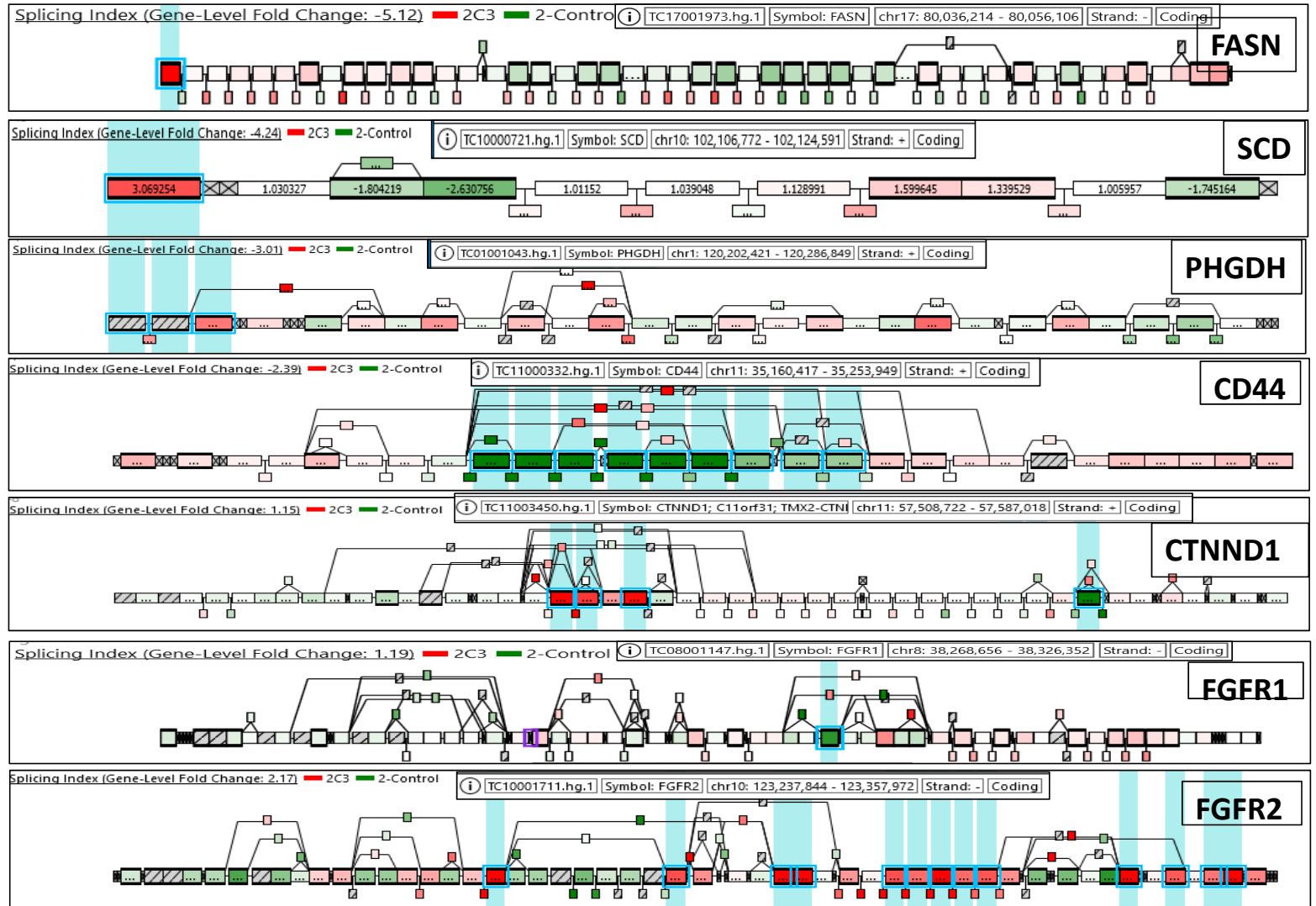
**B** LCC9 model

(see details in Appendix Methods).



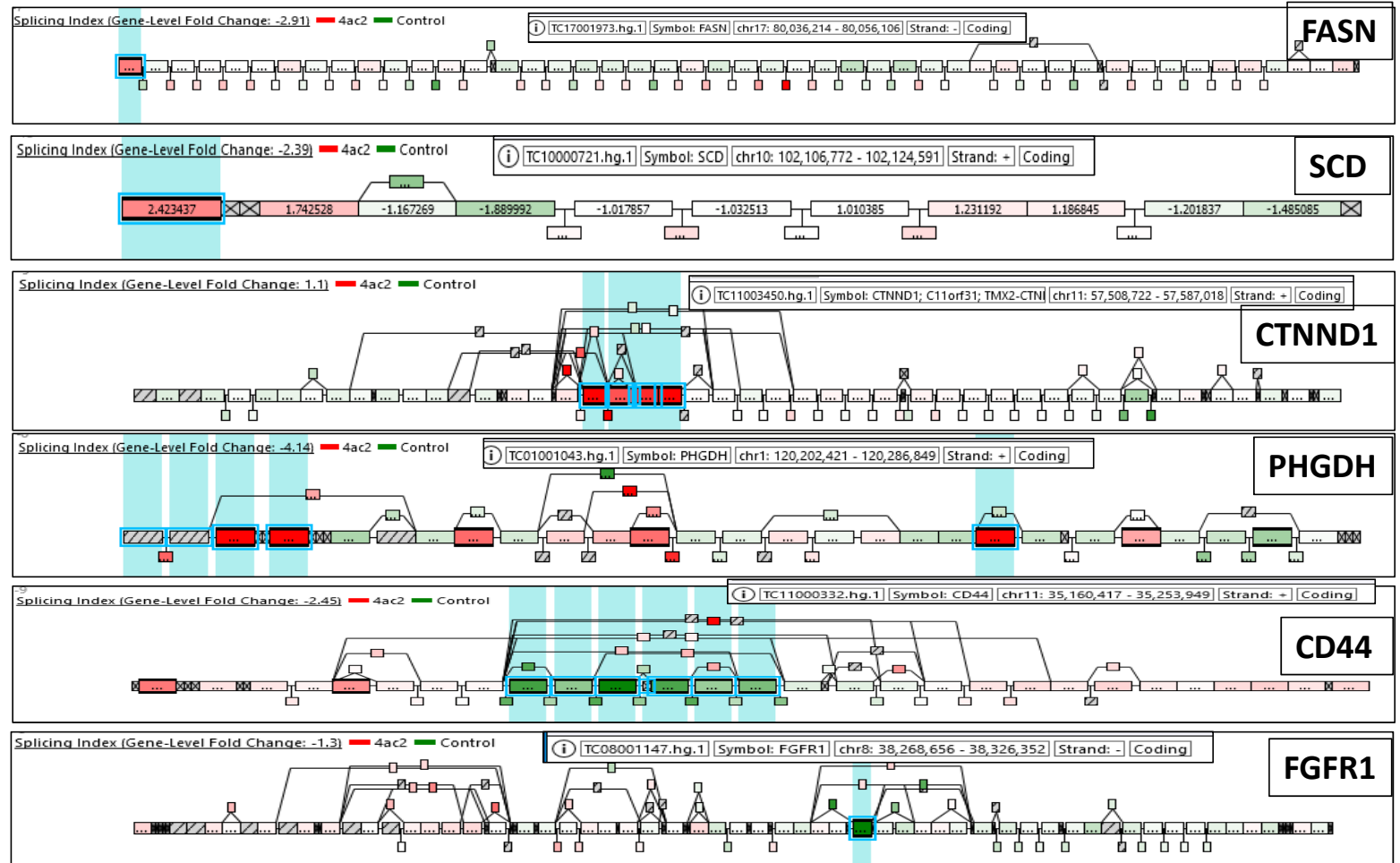
**Appendix Figure S4.** CD44 splice variants in tamoxifen and fulvestrant resistant cell lines in response to *ESRP1* knockdown. qRT-PCR analyses of the splice variants CD44v2-v10 (Hs01075866\_m1), CD44s (Hs01081473\_m1) and CD44-all (HS99999195\_m1) transcripts were performed using TaqMan gene expression assays on an ABI Prism 7900 platform according to the manufacturer's instructions (Applied Biosystems/Thermo Fisher Scientific). All qRT-PCR reactions were performed in triplicates with the average of three independent sets. The relative quantification of the gene expression changes was analyzed according to DDCT method using the Applied Biosystems DataAssist™ Software v3.0. All graphs were generated using GraphPad Prism 5 software. Data are shown as mean±SD (n=3 independent assays) using simple one-way ANOVA using GraphPad Prism software.

## 2C3 vs 2-control

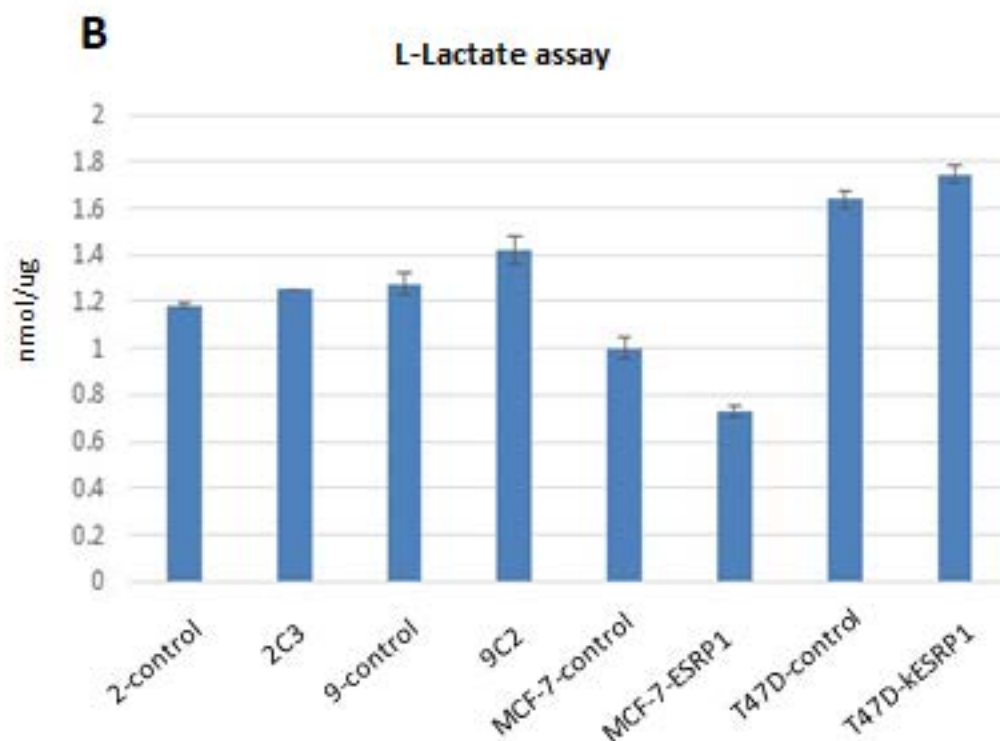
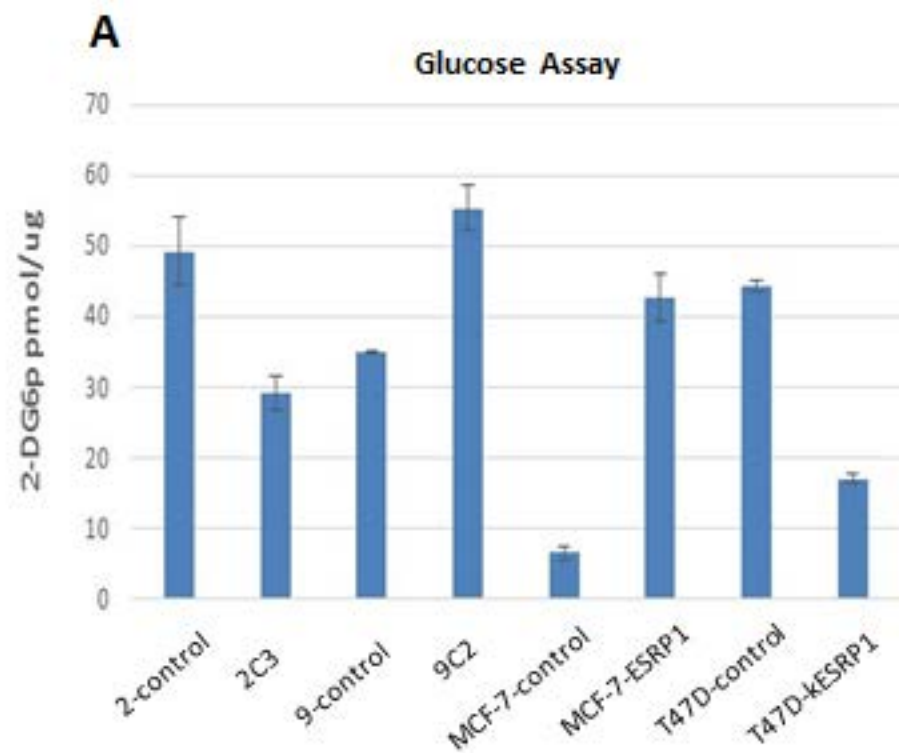


**Appendix Figure S5.** Structural Views of Alternative Splicing Events (ASEs) of key genes in n LCC2-ESRP1 (2C3) knockdown cells compared to LCC2 control (2-control) resistant cell lines using HTA analysis (TAC 4.0 software).

## 9C2 vs 9-control



**Appendix Figure S6.** Structural Views of Alternative Splicing Events (ASEs) of key genes in n LCC9-ESRP1 (9C2) knockdown cells compared to LCC9 control (9-control) resistant cell lines using HTA analysis (TAC 4.0 software).



**Appendix Figure S7.** Evaluation of Glucose uptake and production of lactic acid.

A Glucose uptake assay

B L-lactate assay

(See details in Appendix Methods).