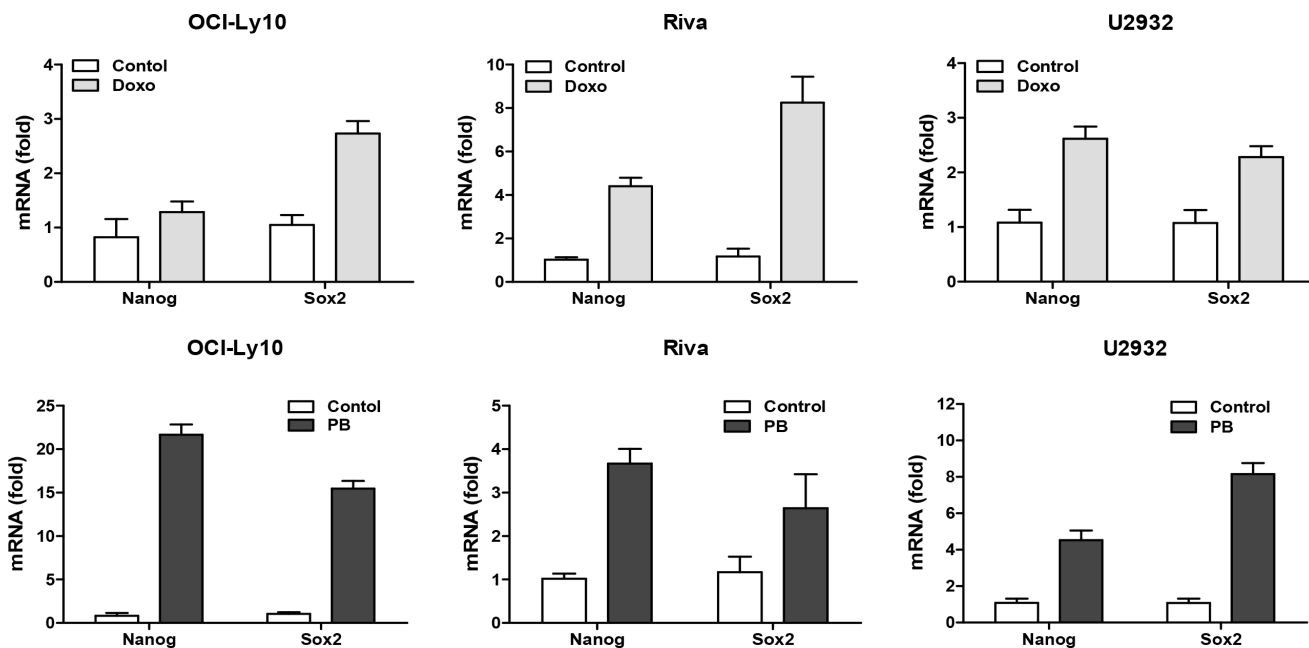
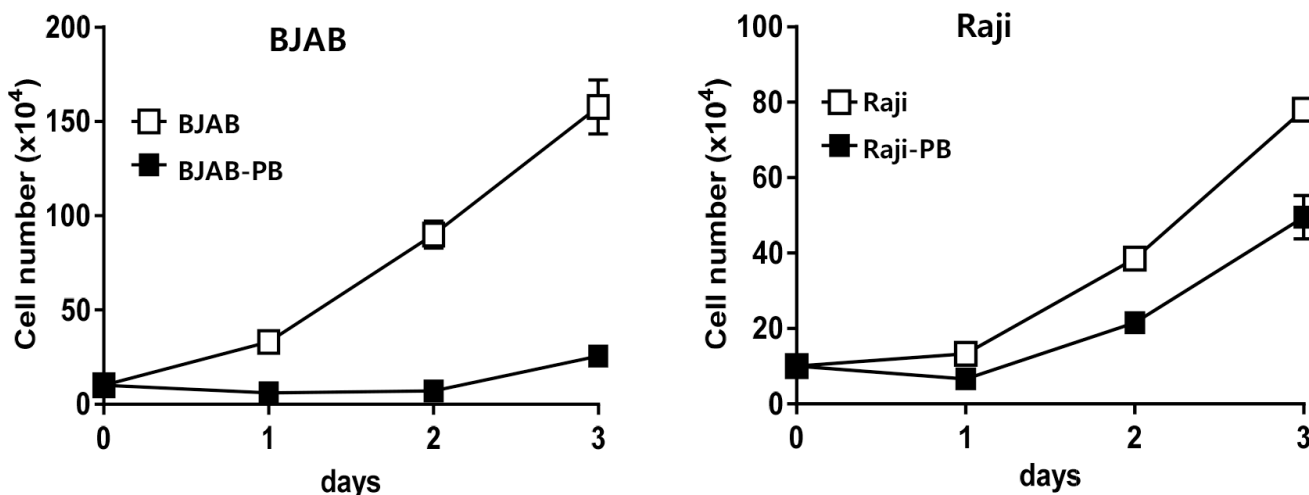


Forkhead box O4 expression is related to stem cell-like properties and resistance to treatment in diffuse large B-cell lymphoma

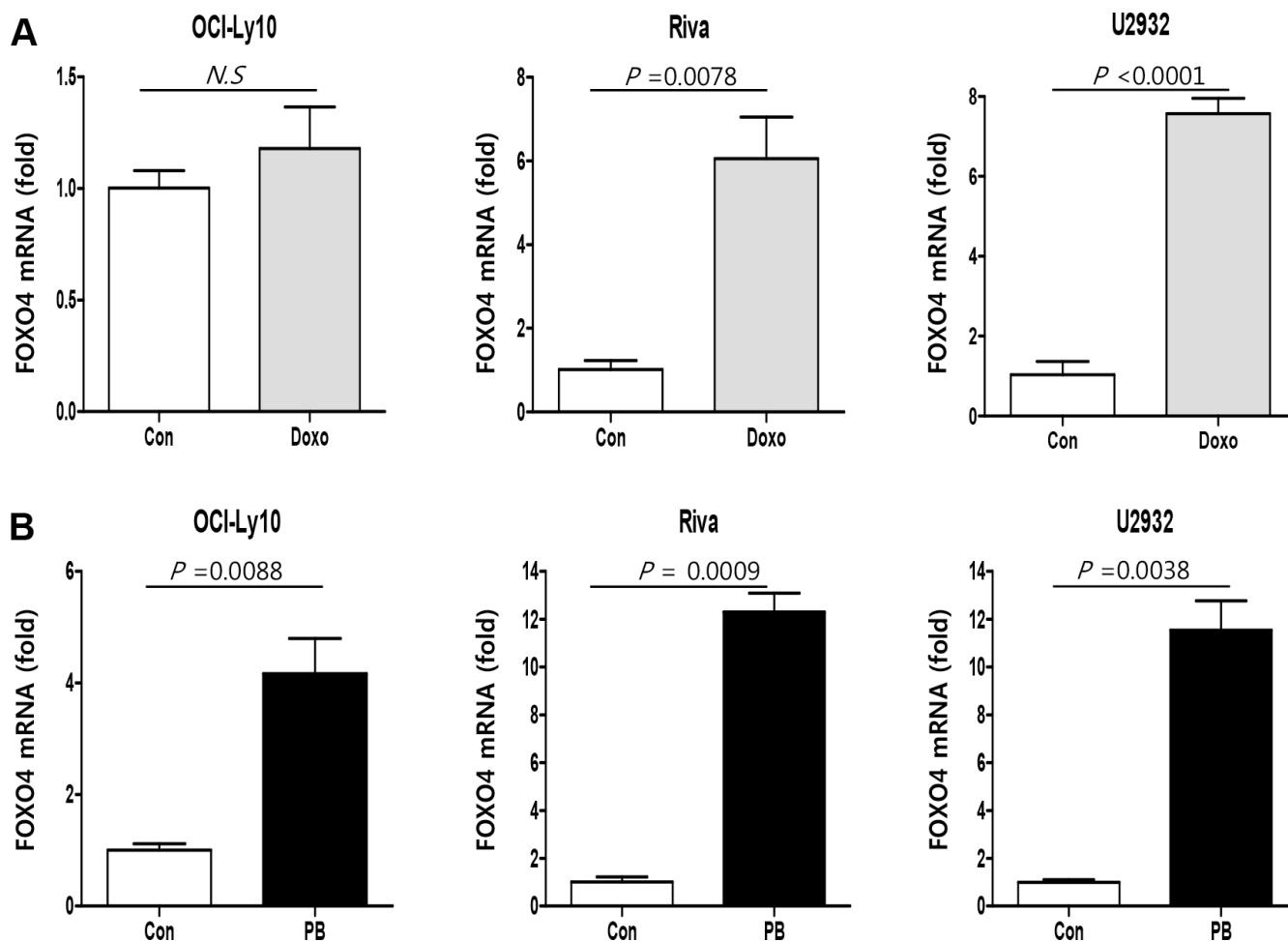
Supplementary Materials



Supplementary Figure S1: The mRNA expression of Nanog and SOX2 is increased in surviving cells after IC90 treatment with doxorubicin and phenylbutyrate compared to control cells in other B-cell lymphoma cell lines (OCI-Ly10, Riva, U2932).



Supplementary Figure S2: Cell growth kinetics of non-treated and treatment-surviving cells. The values represent means \pm SD of three independent experiments. After treatment with phenylbutyrate (8 mM) for 48 h, surviving live cells are sorted via flow cytometry and cultured. Cell growth is monitored every 24 h for 3 days. The cell number is assessed based on trypan blue staining. Data represent means \pm SD.



Supplementary Figure S3: FOXO4 mRNA levels are upregulated in treatment-surviving B cell lymphoma cells. (A) OCI-Ly10 cells are treated with doxorubicin (300 nM) for 48 h, and Riva and U2932 cells treated with Doxorubicin (3 μ M) for 72 h. (B) Phenylbutyrate (8 mM) treatment is performed for 24 h. Non-treated cells (control) and respective treatment-surviving cells are collected and FOXO4 mRNA expression evaluated using RT-qPCR. Data represent means \pm SEM of three independent experiments.

Supplementary Table S1: Proportion of viable cells after treatment with doxorubicin or phenylbutyrate

Cell line	Doxorubicin	Phenylbutyrate
BJAB	9.48 \pm 2.37%	10.28 \pm 1.87%
Raji	7.45 \pm 3.77%	6.54 \pm 2.22%
Daudi	6.15 \pm 0.93%	15.57 \pm 0.93%
Toledo	9.61 \pm 5.12%	6.32 \pm 1.47%
OCI-Ly10	10.75 \pm 1.95%	8.6 \pm 3.35%
Riva	10.49 \pm 0.17%	6.13 \pm 1.64%
U2932	10.12 \pm 3.00%	6.43 \pm 1.48%

Supplementary Table S2: Commonly upregulated genes in treatment-surviving cells

Gene Symbol	Gene Title	Gene Symbol	Gene Title
<i>ACTA2</i>	smooth muscle aortic alpha-actin	<i>HLA-H</i>	MHC complex, class I, H
<i>APOBEC3F</i>	Apolipoprotein B mRNA editing enzyme	<i>ID2</i>	Inhibitor of DNA binding 2
<i>C9orf9</i>	Chromosome 9 open reading frame 95	<i>IFI6</i>	Interferon alpha-inducible protein 6
<i>CCR7</i>	Chemokine receptor 7	<i>JUN</i>	Jun proto-oncogene
<i>CDKN1A</i>	Cyclin-dependent kinase inhibitor 1A	<i>KLF6</i>	Kruppel-like factor 6
<i>COL9A2</i>	Collagen, type IX, alpha 2	<i>LOC727820</i>	Hypothetical protein
<i>DUSP1</i>	Dual-specificity phosphatase 1	<i>MX1</i>	Myxovirus resistance 1
<i>EPSTI1</i>	Epithelial-stromal interaction1	<i>MXD4</i>	MAX dimerization protein 4
FOXO4	Forkhead box O4	<i>N4BP2L1</i>	EDD4 binding protein 2-like 1
<i>GNS</i>	Glucosamine N-acetyl-6-sulfatase	<i>NEU1</i>	Neuraminidase 1
<i>HCP5</i>	HLA complex P5	<i>NPC2</i>	Niemann-Pick disease, type C2
<i>HIST1H1C</i>	Histone cluster 1, H1c	<i>OAS2</i>	Oligoadenylate synthetase 2
<i>HIST1H2A</i>	Histone cluster 1, H2ac	<i>OPTN</i>	Optineurin
<i>HIST1H2BD</i>	Histone cluster 1, H2b	<i>PRIC285</i>	PPARa interacting complex 285
<i>HIST1H2BK</i>	Histone cluster 1, H2bk	<i>PSAP</i>	Prosaposin
<i>HIST1H4H</i>	Histone cluster 1, H4h	<i>STAT2</i>	STAT2
<i>HIST2H2AA3</i>	Histone cluster 2, H2aa3	<i>TCTN1</i>	Tectonic family member 1
<i>HIST2H2BE</i>	Histone cluster 2, H2be	<i>TP53INP1</i>	TP53 inducible nuclear protein 1
<i>HLA-A</i>	MHC class I, A	<i>TSGA10</i>	Testis specific, 10
<i>HLA-B</i>	MHC class I, B	<i>YPEL5</i>	Yippee-like 5
<i>HLA-F</i>	Major histocompatibility complex, class I, F		