Supplemental Data

Supplemental legends:

Supplemental Figure 1: Treatment of Bcl-2 overexpressing cells with ABT-737 does not induce any significant changes in Bcl-2 family member expression.

Western blot analysis of thymocytes from (**A**) *vavP-Bcl-2*, (**B**) WT or *vavP-Mcl-1* treated for 24 h with ABT-737 (200 nM) in the presence of the caspase inhibitor QVD-OPH (25 μM) revealed no change in the expression of Bcl-2, Bcl-x_L, Mcl-1 or Bim.

Supplemental Figure 2: Bim binding partners.

(**A**) High Bcl-2 levels increase Bim stability. Estimation of Bim and Bcl-2 stability in thymocytes treated with CHX (50 μg/ml, Sigma) for the indicated times. The 8 h control sample shown with an asterisk was treated in the presence of the proteasome inhibitor MG-132 (20 μM, Sigma). All cells were co-treated with the pan-caspase inhibitor QVD-OPH (25 μM). (**B**) Higher expression of Mcl-1 correlates with higher Bim levels in *vavP-Mcl-1* lymphocytes. Expression of Mcl-1 and Bim in *vavP-Mcl-1/Bim$^{+/+}$*, *vavP-Mcl-1/Bim$^{B/B}$* and *vavP-Mcl-1/Bim$^{N/N}$* thymocytes was determined by western blot. The level of the Bim$^{B/B}$ mutant (which does not bind to Mcl-1) was not significantly increased when Mcl-1 was overexpressed. (**C**) Thymocytes from *vavP-Bcl-2* mice were cultivated for 5 hr with cycloheximide (CHX) (50 μg/mL), QVD-OPH (25 μM) and ABT-737 (1 μM) prior to Bim immunoprecipitation.

Supplemental Figure 3: Overexpression of Bcl-x_L, Bcl-w or Mcl-1 protects from ABT-737 induced cell death.

(**A**) Overexpression of Bcl-2, Bcl-x_L, Bcl-w or Mcl-1 caused resistance to etoposide or dexamethasone. Lymphoid cells were treated for 24 h with the indicated doses of these drugs. These results represent the means of 3 independent experiments, each of which was performed in triplicate, ± SEM. (**B**) Heat-Map representing the EC50 for ABT-737 sensitivity of different subsets of B and T cells from mice reconstituted with WT fetal liver cells transduced with retroviral vectors having no insert or encoding Bcl-2, Bcl-x_L, Bcl-w or Mcl-1.

Supplemental Figure 4: Pro-survival proteins overexpressed in lymphoid cells are bound to Bim.

(**A**) Lethally irradiated mice were reconstituted with fetal liver cells transduced with pMIG retroviral vectors having no insert or expressing FLAG-Bcl-2, FLAG-Bcl-x$_L$, FLAG-Bcl-w or FLAG-Mcl-1. Spleen lysates were subjected to immunoprecipitation using anti-FLAG antibody and the level of Bim complexed to pro-survival proteins was assessed by western blotting. Duplicate results shown are from independent mice. (*, non-specific band). (**B**) Half-life of the FLAG-tagged overexpressed pro-survival Bcl-2 family members and Bim was assessed by Western blot analysis following treatment of thymocytes with CHX (50 µg/mL) at the indicated times. The asterisked 8 h sample was also exposed to MG-132 (20 µM). All cells were co-treated with QVD-OPH (25 µM). Mcl-1 analysis is presented as a positive control. (**C**) Real-Time quantitative PCR experiments using Sybr Green were performed to determine the levels of mRNA transcripts. cDNA was prepared from thymocytes of mice reconstituted with WT fetal liver cells expressing the *Bcl-2, Bcl-x$_L$, Bcl-w, Mcl-1* or control (Ctl) (empty) vector. The values have been normalized to actin levels and are means (± SEM) obtained from 5 mice per group.

Supplemental Figure 5:   ABT-737 is more efficient at displacing Bad/Bcl-x$_L$ complexes than BimSΔC/Bcl-x$_L$ complexes.

Confocal images of Flp-In^{TM} T-REx™ 293 cells with single copy integration of an inducible bicistronic construct expressing eGFP-Bcl-xL with mCherry-Bad or mCherry-BimSΔC at 0, 100, or 350 minutes after 11.1 µM ABT-737 addition. Scale bar represents 25 µm and applies to all panels.

Supplemental Figure 6: Bcl-2 sensitizes lymphocytes to ABT-737 while Bcl-x$_L$ and Bcl-w protect them against it.

ABT-737 disrupts Bcl-2/Bim complexes efficiently, freeing Bim, which can then inhibit Mcl-1. Bcl-x$_L$/Bim complexes are resistant to disruption by ABT-737, leaving Mcl-1 free to inhibit Bax/Bak.

Supplemental Table 1: EC$_{50}$ values presented as heat-maps in Figure 3A and 4E.

Values represent the mean of the EC$_{50}$ collected from at least 3 independent experiments done in triplicate (except for *Bax$^{-/-}$Bak$^{-/-}$* DKO transgenic mice, 1 experiment done in triplicate could be done). Two sample t-tests have been done as described in Methods. P-values were adjusted for multiple testing within a cell type using Holm's method. In some cases, the sigmoid curves 'dose-responses' did not

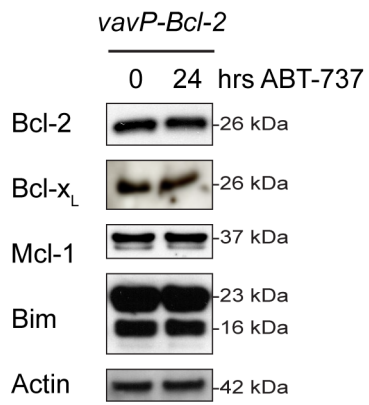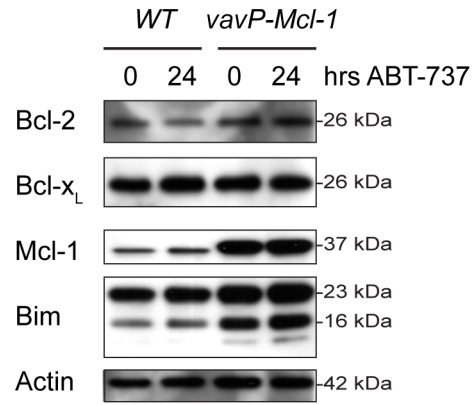converge and did not reach 50% viability below 4 μM, therefore we assumed that the EC50 > 4 μM.

Supplemental Table 2: EC$_{50}$ values presented as heat-maps in Fig. 3B and Supplemental Figure 3A.

As in **Supplemental Table 1**, values represent the mean of the EC$_{50}$ collected from at least 3 independent experiments done in triplicate. Two sample t–tests were performed comparing each cell type from reconstituted mouse with WT + Empty vector.

A

vavP-Bcl-2

0   24   hrs ABT-737

Bcl-2   ▭   —26 kDa

Bcl-x_L   ▭   —26 kDa

Mcl-1   ▭   —37 kDa

Bim   ▭   —23 kDa
                    —16 kDa

Actin   ▭   —42 kDa

B

WT   vavP-Mcl-1

0   24   0   24   hrs ABT-737

Bcl-2   —26 kDa

Bcl-x_L   —26 kDa

Mcl-1   —37 kDa

Bim   —23 kDa
                      —16 kDa

Actin   —42 kDa

Supplemental Figure 1

4

A

WT   vavP-Bcl-2

0 1 2 4 8 8*   0 1 2 4 8 8*   hrs

Bcl-2   -26 kDa

Bim   -23 kDa

Mcl-1   -37 kDa

B

Bim^+/+   *Bim^N/N*   *Bim^B/B*

- *Tg*   - *Tg*   - *Tg*   *vavP-Mcl-1*

Mcl-1   -37 kDa

Bim   -23 kDa
                                                -16 kDa

Actin   -42 kDa

C

Ctl   Bim IP

–   –   +   –   +   ABT-737 (1 μM)
–   –   –   +   +   CHX (25 μM)

IP: Bim   -23 kDa
                                  -16 kDa

WB: Bcl-2   -26 kDa

WB: Mcl-1   -37 kDa
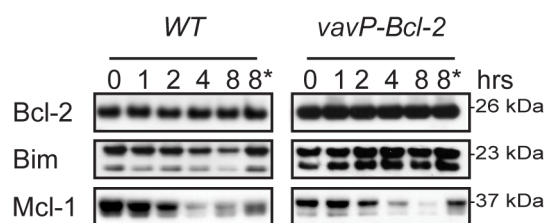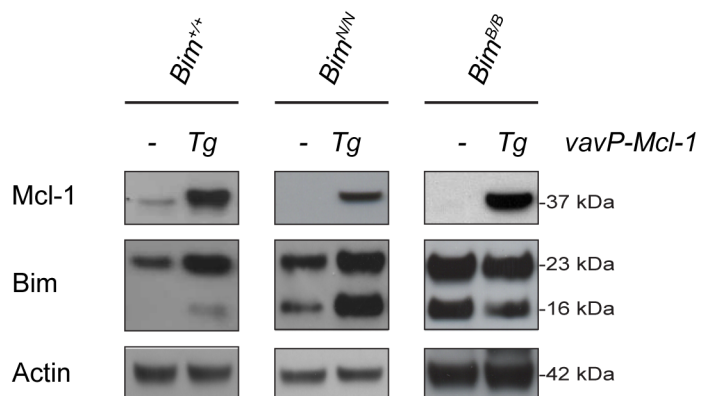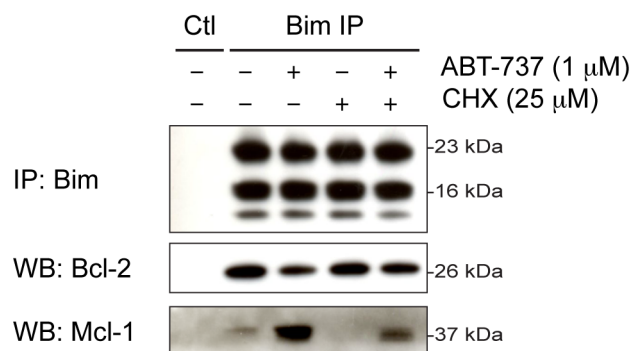
Supplemental Figure 2

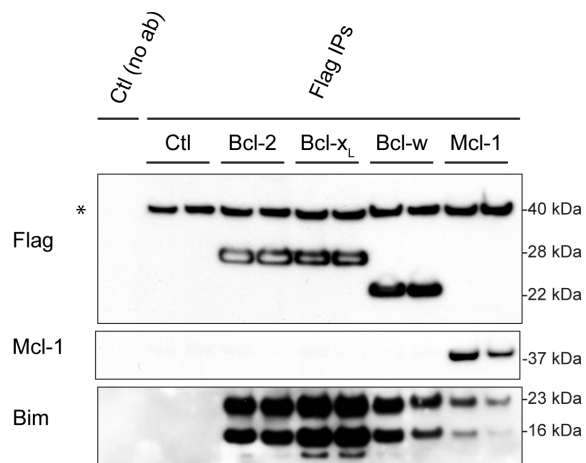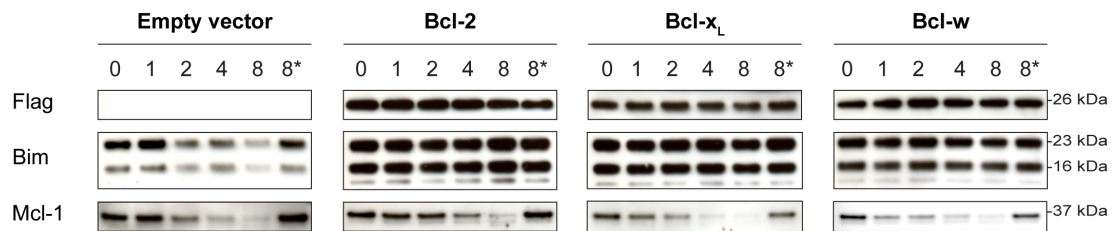**A**
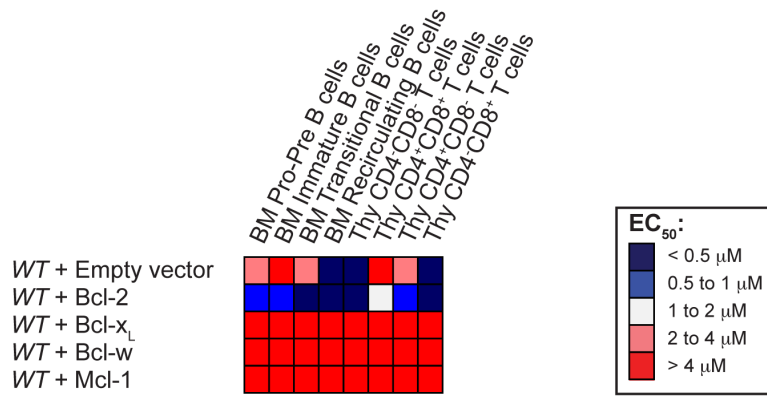
B
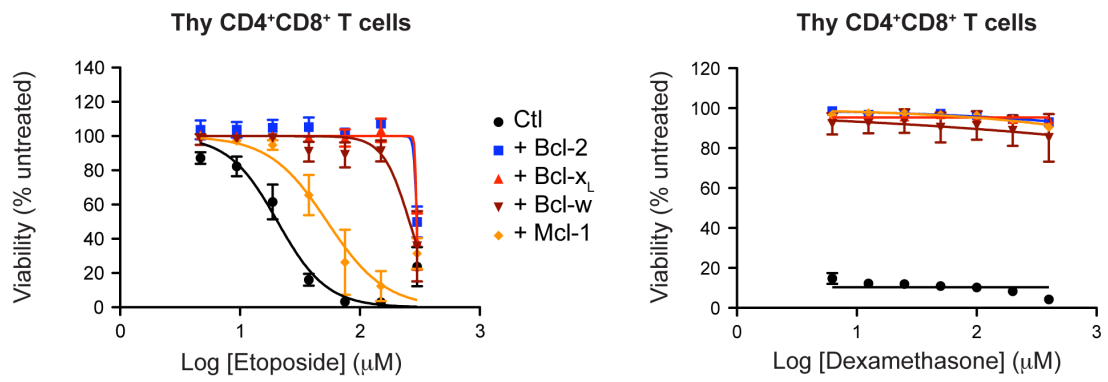
Supplemental Figure 3

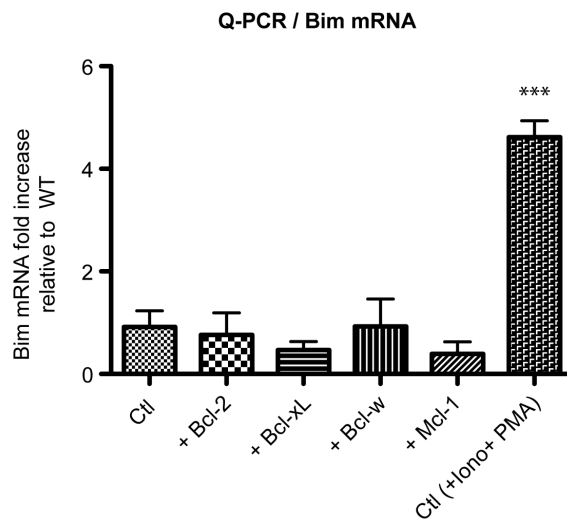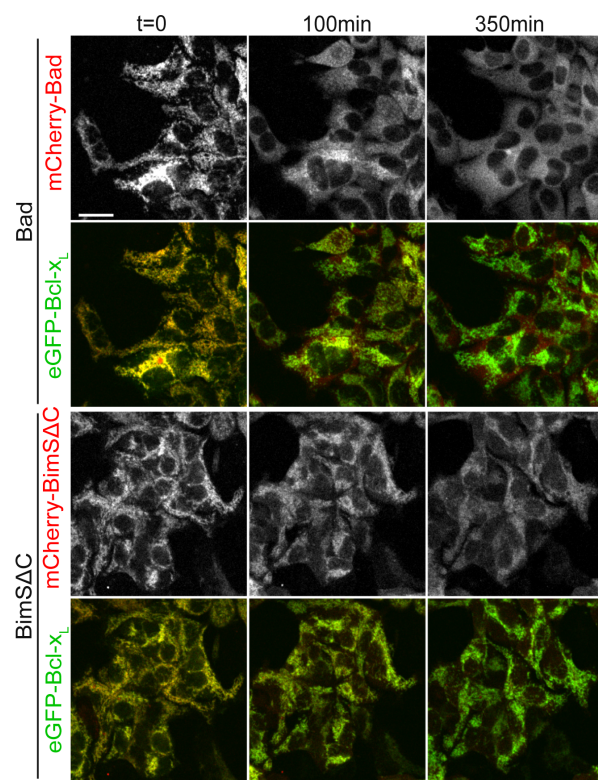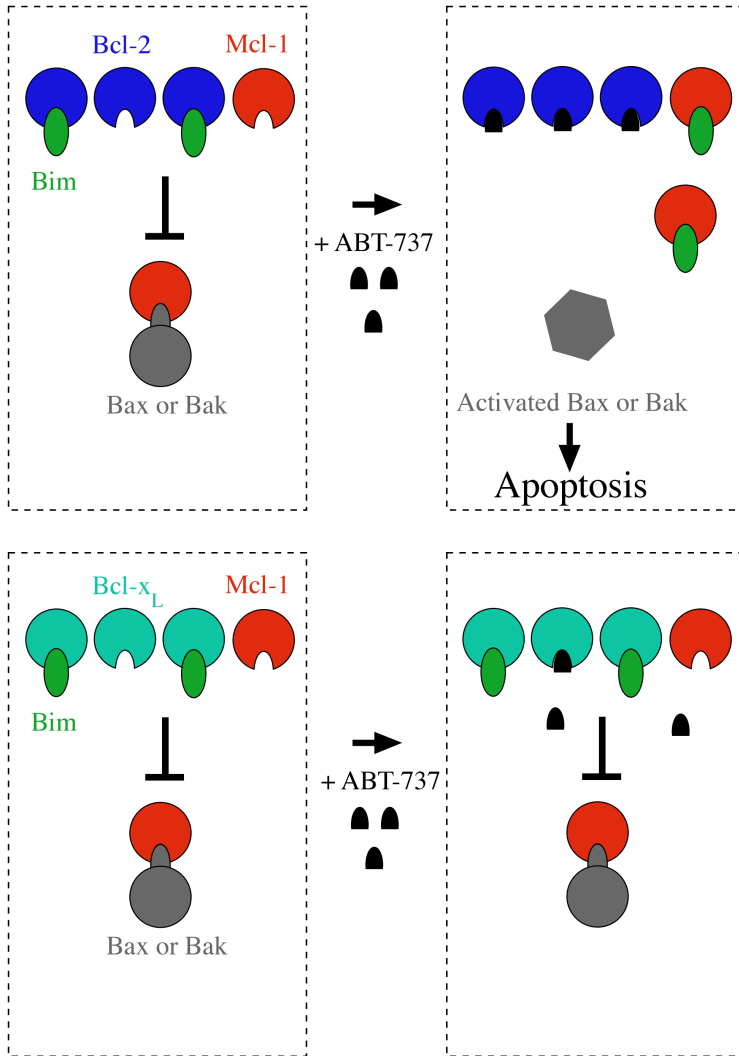**A**

B

C

Q-PCR / Bim mRNA

Supplemental Figure 4

Supplemental Figure 5

Supplemental Figure 6

Supplemental Table 1

BM Pro-Pre B cells	EC50	*n*	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT	1.01E-06	10	-5.996	0.02405					
Noxa^{-/-}	1.52E-06	4	-5.819	0.1113	0.076511424	2.313380014	0.039235182	0.156940728	
Puma^{-/-}	9.24E-07	3	-6.034	0.01548	0.04590577	-0.827782658	0.425388367	1	
Bmf^{-/-}	5.94E-06	4	-5.226	0.1048	0.073228209	10.51507353	2.07599E-07	1.66079E-06	Yes
Bim^{-/-}	> 4.00E-06	5	ND						Yes
Bax^{-/-}	> 4.00E-06	5	ND						Yes
Bak^{-/-}	> 4.00E-06	9	ND						Yes
Bax^{-/-}Bak^{-/-}	> 4.00E-06	1	ND						Yes
Bim[N/N]	> 4.00E-06	5	ND						Yes
Bim[P/P]	2.88E-06	3	-5.541	0.09137	0.063434818	7.172717043	1.81495E-05	9.07475E-05	Yes
Bim[B/B]	> 4.00E-06	7	ND						Yes
vavP-Bcl-2 Bim^{+/+}	2.57E-07	7	-6.59	0.05039	0.050689629	-11.71837337	5.97616E-09	5.37854E-08	Yes
vavP-Bcl-2 Bax^{-/-}	9.46E-07	3	-6.024	0.07125	0.057014161	-0.491106061	0.633002571	1	
vavP-Bcl-2 Bak^{-/-}	1.00E-06	3	-5.999	0.07069	0.056849159	-0.052771229	0.958860352	1	
vavBcl-2 Bim[N/N]	2.71E-07	3	-6.567	0.1274	0.076727187	-7.441951441	1.29019E-05	7.74114E-05	Yes
vavBcl-2 Bim[P/P]	3.04E-07	4	-6.517	0.05966	0.052574395	-9.909766889	3.94947E-07	2.76463E-06	Yes
vavBcl-2 Bim[B/B]	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bim^{+/+}	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bim[N/N]	> 4.00E-06	3	ND						Yes
vavP-Mcl-1 Bim[B/B]	> 4.00E-06	3	ND						Yes

BM Immature B cells	EC50	*n*	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT	3.12E-06	10	-5.507	0.0533					
Noxa^{-/-}	> 4.00E-06	4	ND						Yes
Puma^{-/-}	3.82E-06	3	-5.419	0.05838	0.10429682	0.843745763	0.4167829	0.4167829	
Bmf^{-/-}	> 4.00E-06	4	ND						Yes
Bim^{-/-}	> 4.00E-06	5	ND						Yes
Bax^{-/-}	> 4.00E-06	5	ND						Yes
Bak^{-/-}	> 4.00E-06	9	ND						Yes
Bax^{-/-}Bak^{-/-}	> 4.00E-06	1	ND						Yes
Bim[N/N]	> 4.00E-06	5	ND						Yes
Bim[P/P]	8.82E-06	3	-5.054	0.1518	0.124574598	3.636375383	0.00391279	0.01565116	Yes
Bim[B/B]	> 4.00E-06	7	ND						Yes
vavP-Bcl-2 Bim^{+/+}	2.98E-07	7	-6.525	0.07301	0.08811524	-11.55305263	7.24913E-09	5.07439E-08	Yes
vavP-Bcl-2 Bax^{-/-}	1.22E-06	3	-5.915	0.1128	0.114366514	-3.567477812	0.00441455	0.01565116	Yes
vavP-Bcl-2 Bak^{-/-}	1.91E-06	3	-5.719	0.06273	0.104892086	-2.021124828	0.068284223	0.136568446	
vavBcl-2 Bim[N/N]	2.04E-07	3	-6.689	0.08706	0.108920848	-10.85191694	3.24707E-07	1.94824E-06	Yes
vavBcl-2 Bim[P/P]	5.56E-07	4	-6.255	0.06332	0.094130941	-7.946377573	4.02763E-06	2.01382E-05	Yes
vavBcl-2 Bim[B/B]	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bim^{+/+}	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bim[N/N]	> 4.00E-06	3	ND						Yes
vavP-Mcl-1 Bim[B/B]	> 4.00E-06	3	ND						Yes

BM Transitional B cells	EC50	n	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT	5.58E-06	10	-5.254	0.07365					
Noxa$^{-/-}$	> 4.00E-06	4	ND						Yes
Puma$^{-/-}$	> 4.00E-06	3	ND						Yes
Bmf$^{-/-}$	> 4.00E-06	4	ND						Yes
Bim$^{-/-}$	> 4.00E-06	5	ND						Yes
Bax$^{-/-}$	> 4.00E-06	5	ND						Yes
Bak$^{-/-}$	> 4.00E-06	9	ND						Yes
Bax$^{-/-}$Bak$^{-/-}$	> 4.00E-06	1	ND						Yes
Bim$^{N/N}$	> 4.00E-06	5	ND						Yes
Bim$^{P/P}$	> 4.00E-06	3	ND						Yes
Bim$^{B/B}$	> 4.00E-06	7	ND						Yes
vavP-Bcl-2 Bim$^{+/+}$	1.92E-07	7	-6.717	0.03827	0.094339472	-15.50782478	1.21218E-10	6.0609E-10	Yes
vavP-Bcl-2 Bax$^{-/-}$	8.69E-07	3	-6.061	0.09594	0.146312317	-5.51559853	0.000181916	0.000363832	Yes
vavP-Bcl-2 Bak$^{-/-}$	9.86E-07	3	-6.006	0.05796	0.14151226	-5.314027201	0.00024704	0.000363832	Yes
vavBcl-2 Bim$^{N/N}$	1.17E-07	3	-6.932	0.08213	0.144312304	-11.62756015	1.60744E-07	6.42976E-07	Yes
vavBcl-2 Bim$^{P/P}$	5.30E-07	4	-6.276	0.06801	0.12592745	-8.115784145	3.24455E-06	9.73365E-06	Yes
vavBcl-2 Bim$^{B/B}$	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bim$^{+/+}$	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bim$^{N/N}$	> 4.00E-06	3	ND						Yes
vavP-Mcl-1 Bim$^{B/B}$	> 4.00E-06	3	ND						Yes

BM Recirculating B cells	EC50	n	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT	1.13E-07	10	-6.947	0.04803					
Noxa$^{-/-}$	2.22E-07	4	-6.654	0.07949	0.090923558	3.22248718	0.007320624	0.014641248	Yes
Puma$^{-/-}$	7.69E-07	3	-6.114	0.04646	0.093215555	8.936276754	2.24695E-06	2.24695E-05	Yes
Bmf$^{-/-}$	4.60E-07	4	-6.337	0.04925	0.083093377	7.341138666	8.96103E-06	5.37662E-05	Yes
Bim$^{-/-}$	> 4.00E-06	5	ND						Yes
Bax$^{-/-}$	1.04E-06	5	-5.983	0.06914	0.083651209	11.52404146	3.39038E-08	4.06846E-07	Yes
Bak$^{-/-}$	6.51E-07	9	-6.187	0.1037	0.11042347	6.882594817	2.65484E-06	2.24695E-05	Yes
Bax$^{-/-}$Bak$^{-/-}$	> 4.00E-06	1	ND						Yes
Bim$^{N/N}$	6.35E-07	5	-6.197	0.08576	0.090475007	8.289582104	1.51185E-06	1.66304E-05	Yes
Bim$^{P/P}$	4.28E-07	3	-6.368	0.09468	0.101477961	5.70567241	0.000137038	0.000548152	Yes
Bim$^{B/B}$	> 4.00E-06	7	ND						Yes
vavP-Bcl-2 Bim$^{+/+}$	2.26E-07	7	-6.645	0.04606	0.069311551	4.357138118	0.000563285	0.001689855	Yes
vavP-Bcl-2 Bax$^{-/-}$	8.37E-07	3	-6.077	0.08307	0.099045435	8.783847546	2.65733E-06	2.24695E-05	Yes
vavP-Bcl-2 Bak$^{-/-}$	7.95E-07	3	-6.1	0.06327	0.09552553	8.866739562	2.42498E-06	2.24695E-05	Yes
vavBcl-2 Bim$^{N/N}$	1.13E-07	3	-6.948	0.1016	0.103047655	-0.009704248	0.992431015	0.992431015	
vavBcl-2 Bim$^{P/P}$	4.52E-07	4	-6.345	0.0747	0.089490747	6.726952426	2.11262E-05	0.000105631	Yes
vavBcl-2 Bim$^{B/B}$	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bim$^{+/+}$	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bim$^{N/N}$	> 4.00E-06	3	ND						Yes
vavP-Mcl-1 Bim$^{B/B}$	> 4.00E-06	3	ND						Yes

Thy CD4⁻CD8⁻ T cells	EC50	*n*	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT	1.55E-07	10	-6.809	0.04532					
Noxa⁻/⁻	9.86E-08	4	-7.006	0.08345	0.088480844	-2.226470636	0.045901287	0.275407722	
Puma⁻/⁻	1.91E-07	3	-6.719	0.0612	0.090373134	0.99587118	0.340715277	1	
Bmf⁻/⁻	2.22E-07	4	-6.655	0.09423	0.092191357	1.670438585	0.12068775	0.60343875	
Bim⁻/⁻	> 4.00E-06	5	ND						Yes
Bax⁻/⁻	6.01E-07	5	-6.221	0.06209	0.077750277	7.562673976	4.1153E-06	4.52683E-05	Yes
Bak⁻/⁻	4.77E-07	9	-6.321	0.09387	0.100866865	4.838060564	0.00015398	0.00123184	Yes
Bax⁻/⁻Bak⁻/⁻	> 4.00E-06	1	ND						Yes
Bimᴺ/ᴺ	7.45E-07	5	-6.128	0.0516	0.074126049	9.1870538	4.7677E-07	5.72124E-06	Yes
Bimᴾ/ᴾ	8.42E-07	3	-6.075	0.07061	0.091980829	7.979923767	6.69011E-06	6.69011E-05	Yes
Bimᴮ/ᴮ	> 4.00E-06	7	ND						Yes
vavP-Bcl-2 Bim⁺/⁺	6.78E-08	7	-7.169	0.05205	0.069534789	-5.177264561	0.000112547	0.001012923	Yes
vavP-Bcl-2 Bax⁻/⁻	1.27E-07	3	-6.896	0.0703	0.091924686	-0.946426944	0.364257669	1	
vavP-Bcl-2 Bak⁻/⁻	1.91E-07	3	-6.718	0.07569	0.09293083	0.979222931	0.348515396	1	
vavBcl-2 Bimᴺ/ᴺ	7.45E-07	3	-6.893	0.0539	0.089267595	-0.940990956	0.366915322	1	
vavBcl-2 Bimᴾ/ᴾ	3.81E-07	4	-6.419	0.106	0.096561347	4.038883163	0.001642781	0.011499467	Yes
vavBcl-2 Bimᴮ/ᴮ	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bim⁺/⁺	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bimᴺ/ᴺ	> 4.00E-06	3	ND						Yes
vavP-Mcl-1 Bimᴮ/ᴮ	> 4.00E-06	3	ND						Yes

Thy CD4⁺CD8⁺ T cells	EC50	*n*	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT	3.06E-06	10	-5.514	0.05851					
Noxa⁻/⁻	1.77E-06	4	-5.753	0.05954	0.101129777	-2.363299977	0.035835603	0.135436648	
Puma⁻/⁻	1.64E-06	3	-5.784	0.03473	0.111457058	-2.422457626	0.033859162	0.135436648	
Bmf⁻/⁻	3.41E-06	4	-5.468	0.09437	0.110015779	0.41812184	0.683243096	0.683243096	
Bim⁻/⁻	> 4.00E-06	5	ND						Yes
Bax⁻/⁻	> 4.00E-06	5	ND						Yes
Bak⁻/⁻	> 4.00E-06	9	ND						Yes
Bax⁻/⁻Bak⁻/⁻	> 4.00E-06	1	ND						Yes
Bimᴺ/ᴺ	7.90E-06	5	-5.103	0.07494	0.098499654	4.172603483	0.001094053	0.008752424	Yes
Bimᴾ/ᴾ	8.40E-06	3	-5.076	0.08811	0.11820558	3.705408821	0.003468774	0.024281418	Yes
Bimᴮ/ᴮ	> 4.00E-06	7	ND						Yes
vavP-Bcl-2 Bim⁺/⁺	1.14E-06	7	-5.942	0.046	0.080170394	-5.338629091	8.27548E-05	0.000744793	Yes
vavP-Bcl-2 Bax⁻/⁻	4.07E-06	3	-5.391	0.03594	0.111547691	1.102667378	0.293711716	0.587423432	
vavP-Bcl-2 Bak⁻/⁻	> 4.00E-06	3	ND						Yes
vavBcl-2 Bimᴺ/ᴺ	6.56E-06	3	-5.183	0.06324	0.114380369	2.89385322	0.014604827	0.087628962	
vavBcl-2 Bimᴾ/ᴾ	5.72E-06	4	-5.243	0.0816	0.106381266	2.547441012	0.025585836	0.12792918	
vavBcl-2 Bimᴮ/ᴮ	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bim⁺/⁺	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bimᴺ/ᴺ	> 4.00E-06	3	ND						Yes
vavP-Mcl-1 Bimᴮ/ᴮ	> 4.00E-06	3	ND						Yes

Thy CD4$^+$CD8$^-$ T cells	EC50	*n*	LogEC50	Std. Error	*se(x-wt)*	*t*	*Significance*	*adjusted p-value*	Signif.
WT	1.67E-06	10	-5.778	0.04405					
Noxa$^{-/-}$	1.19E-06	4	-5.925	0.06804	0.081938154	-1.794036018	0.098022832	0.246856996	
Puma$^{-/-}$	> 4.00E-06	3	ND						Yes
Bmf$^{-/-}$	4.31E-06	4	-5.365	0.08351	0.086801086	4.758004965	0.000465708	0.003259956	Yes
Bim$^{-/-}$	> 4.00E-06	5	ND						Yes
Bax$^{-/-}$	> 4.00E-06	5	ND						Yes
Bak$^{-/-}$	2.51E-06	9	-5.601	0.08724	0.094729359	1.86848092	0.079027708	0.246856996	
Bax$^{-/-}$Bak$^{-/-}$	> 4.00E-06	1	ND						Yes
Bim$^{N/N}$	2.52E-06	5	-5.599	0.06468	0.077206956	2.318443962	0.037357115	0.186785575	
Bim$^{P/P}$	2.98E-06	3	-5.756	0.1432	0.108289142	0.203159796	0.84271936	0.84271936	
Bim$^{B/B}$	> 4.00E-06	7	ND						Yes
vavP-Bcl-2 Bim$^{+/+}$	3.14E-07	7	-6.503	0.06013	0.072705317	-9.971760373	5.18625E-08	5.18625E-07	Yes
vavP-Bcl-2 Bax$^{-/-}$	5.56E-07	3	-6.255	0.06732	0.089167285	-5.349495617	0.000233992	0.001871936	Yes
vavP-Bcl-2 Bak$^{-/-}$	1.00E-06	3	-5.959	0.05418	0.087025558	-2.079848766	0.061714249	0.246856996	
VavBcl-2 Bim$^{N/N}$	3.06E-07	3	-6.515	0.08032	0.091675854	-8.039194291	6.23542E-06	5.61188E-05	Yes
VavBcl-2 Bim$^{P/P}$	9.03E-07	4	-6.045	0.08467	0.087193519	-3.062154211	0.009859497	0.059156982	
VavBcl-2 Bim$^{B/B}$	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bim$^{+/+}$	> 4.00E-06	5	ND						Yes
VavP-Mcl-1 Bim$^{N/N}$	> 4.00E-06	3	ND						Yes
vavP-Mcl-1 Bim$^{B/B}$	> 4.00E-06	3	ND						Yes

Thy CD4$^-$CD8$^+$ T cells	EC50	*n*	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT	2.96E-07	10	-6.529	0.03743					
Noxa$^{-/-}$	2.97E-07	4	-6.528	0.09315	0.081942423	0.012203691	0.99046365	1	
Puma$^{-/-}$	6.99E-07	3	-6.155	0.2678	0.148048817	2.526193772	0.028163488	0.168980928	
Bmf$^{-/-}$	4.47E-07	4	-6.35	0.1049	0.086770049	2.062923815	0.061452404	0.267272635	
Bim$^{-/-}$	> 4.00E-06	5	ND						Yes
Bax$^{-/-}$	1.54E-06	5	-5.813	0.08518	0.079110889	9.050587161	5.65103E-07	6.78124E-06	Yes
Bak$^{-/-}$	7.68E-07	9	-6.115	0.1172	0.117674491	3.518179639	0.00263798	0.02110384	Yes
Bax$^{-/-}$Bak$^{-/-}$	> 4.00E-06	1	ND						Yes
Bim$^{N/N}$	8.48E-07	5	-6.071	0.1168	0.095948934	4.773372486	0.000363818	0.00363818	Yes
Bim$^{P/P}$	1.75E-06	3	-5.756	0.1432	0.099066284	7.802856512	8.27459E-06	9.10205E-05	Yes
Bim$^{B/B}$	> 4.00E-06	7	ND						Yes
vavP-Bcl-2 Bim$^{+/+}$	1.75E-07	7	-6.758	0.05981	0.066887853	-3.423641079	0.003770368	0.026392576	Yes
vavP-Bcl-2 Bax$^{-/-}$	3.05E-07	3	-6.516	0.08075	0.080674798	0.161140781	0.874903949	1	
vavP-Bcl-2 Bak$^{-/-}$	1.90E-07	3	-6.722	0.1126	0.089241229	-2.162677515	0.053454527	0.267272635	
vavBcl-2 Bim$^{N/N}$	2.67E-07	3	-6.574	0.05817	0.075940729	-0.592567392	0.565453007	1	
vavBcl-2 Bim$^{P/P}$	6.76E-07	4	-6.17	0.1073	0.087791169	4.089249567	0.001500959	0.013508631	Yes
vavBcl-2 Bim$^{B/B}$	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bim$^{+/+}$	> 4.00E-06	5	ND						Yes
vavP-Mcl-1 Bim$^{N/N}$	> 4.00E-06	3	ND						Yes
vavP-Mcl-1 Bim$^{B/B}$	> 4.00E-06	3	ND						Yes

Supplemental Table 2

BM Pro-Pre B cells	EC50	*n*	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT + Empty vector	2.71E-06	5	-5.568	0.05701					
WT + Bcl-2	5.78E-07	5	-6.238	0.08913	0.105803105	-6.332517376	0.000224786	0.000899144	Yes
Bim$^{-/-}$ + Empty vector	> 4.00E-06	3	ND				Yes		Yes
Bim$^{-/-}$ + Bcl-2	> 4.00E-06	3	ND				Yes		Yes
WT + Bcl-xL	> 4.00E-06	5	ND				Yes		Yes
WT + Bcl-w	> 4.00E-06	5	ND				Yes		Yes
WT + Mcl-1	> 4.00E-06	5	ND				Yes		Yes
Noxa$^{-/-}$ + Empty vector	3.70E-06	4	-5.432	0.09352	0.104525874	1.301113247	0.234407177	0.234407177	
Noxa$^{-/-}$ + Bcl-2	7.02E-07	4	-6.154	0.1612	0.15564274	-3.765032672	0.007028444	0.014056888	Yes
Puma$^{-/-}$ + Empty vector	1.23E-06	4	-5.909	0.05094	0.078616276	-4.337524185	0.003406362	0.010219086	Yes
Puma$^{-/-}$ + Bcl-2	1.66E-07	4	-6.779	0.1146	0.119624606	-10.12333531	1.97322E-05	0.000098661	Yes

BM Immature B cells	EC50	*n*	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT + Empty vector	4.00E-06	5	-5.127	0.2419					
WT + Bcl-2	9.74E-07	5	-6.012	0.1158	0.268188833	-3.299913688	0.010860249	0.032580747	Yes
Bim$^{-/-}$ + Empty vector	> 4.00E-06	3	ND						Yes
Bim$^{-/-}$ + Bcl-2	> 4.00E-06	3	ND						Yes
WT + Bcl-xL	> 4.00E-06	5	ND						Yes
WT + Bcl-w	> 4.00E-06	5	ND						Yes
WT + Mcl-1	> 4.00E-06	5	ND						Yes
Noxa$^{-/-}$ + Empty vector	> 4.00E-06	4	ND						Yes
Noxa$^{-/-}$ + Bcl-2	1.18E-06	4	-5.927	0.1892	0.320700649	-2.494538135	0.041321178	0.082642356	
Puma$^{-/-}$ + Empty vector	4.00E-06	4	-5.518	0.04628	0.277284387	-1.410104639	0.201360862	0.201360862	
Puma$^{-/-}$ + Bcl-2	4.24E-07	4	-6.373	0.09186	0.28590885	-4.358032296	0.003322145	0.01328858	Yes

BM Transitional B cells	EC50	*n*	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT + Empty vector	2.88E-06	5	-5.54	0.2822					
WT + Bcl-2	1.55E-07	5	-6.811	0.08757	0.295474779	-4.301551575	0.002610276	0.01305138	Yes
Bim$^{-/-}$ + Empty vector	> 4.00E-06	3	ND						Yes
Bim$^{-/-}$ + Bcl-2	> 4.00E-06	3	ND						Yes
WT + Bcl-xL	> 4.00E-06	5	ND						Yes
WT + Bcl-w	> 4.00E-06	5	ND						Yes
WT + Mcl-1	> 4.00E-06	5	ND						Yes
Noxa$^{-/-}$ + Empty vector	4.00E-06	4	-5.331	0.4291	0.49439954	0.422735021	0.685171592	1	
Noxa$^{-/-}$ + Bcl-2	3.19E-07	4	-6.497	0.0864	0.32886001	-2.91005282	0.022658839	0.090635356	
Puma$^{-/-}$ + Empty vector	3.03E-06	4	-5.518	0.04628	0.322556194	0.06820517	0.947529673	1	
Puma$^{-/-}$ + Bcl-2	4.24E-07	4	-6.373	0.09186	0.329999602	-2.524245468	0.039564258	0.118692774	

BM Recirculating B cells	EC50	*n*	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT + Empty vector	1.51E-07	5	-6.821	0.1185					
WT + Bcl-2	1.65E-07	5	-6.782	0.06286	0.134140335	0.29074029	0.778644751	1	
Bim$^{-/-}$ + Empty vector	> 4.00E-06	3	ND						Yes
Bim$^{-/-}$ + Bcl-2	> 4.00E-06	3	ND						Yes
WT + Bcl-xL	> 4.00E-06	5	ND						Yes
WT + Bcl-w	> 4.00E-06	5	ND						Yes
WT + Mcl-1	> 4.00E-06	5	ND						Yes
Noxa$^{-/-}$ + Empty vector	2.84E-07	4	-6.547	0.09214	0.156855284	1.746833092	0.124165352	0.372496056	
Noxa$^{-/-}$ + Bcl-2	3.66E-07	4	-6.398	0.08236	0.152600958	2.771935423	0.027617022	0.13808511	
Puma$^{-/-}$ + Empty vector	6.75E-08	4	-7.171	0.03552	0.137940603	-2.537323977	0.03881542	0.15526168	
Puma$^{-/-}$ + Bcl-2	1.56E-07	4	-6.807	0.05321	0.142261978	0.098409991	0.924365478	1	

Thy CD4⁻CD8⁻ T cells	EC50	n	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT + Empty vector	1.72E-07	5	-6.763	0.09982					
WT + Bcl-2	7.95E-08	5	-7.1	0.08997	0.134382414	-2.507768606	0.036497588	0.145990352	
Bim⁻/⁻ + Empty vector	> 4.00E-06	3	ND						Yes
Bim⁻/⁻ + Bcl-2	> 4.00E-06	3	ND						Yes
WT + Bcl-xL	> 4.00E-06	5	ND						Yes
WT + Bcl-w	> 4.00E-06	5	ND						Yes
WT + Mcl-1	> 4.00E-06	5	ND						Yes
Noxa⁻/⁻ + Empty vector	1.51E-07	4	-6.822	0.07328	0.130205369	-0.453130316	0.664166762	1	Yes
Noxa⁻/⁻ + Bcl-2	3.82E-07	4	-6.418	0.1158	0.152169242	2.267212449	0.057714237	0.173142711	
Puma⁻/⁻ + Empty vector	5.45E-08	4	-7.264	0.05352	0.122558441	-4.087845741	0.004643543	0.023217715	Yes
Puma⁻/⁻ + Bcl-2	1.62E-07	4	-6.791	0.04136	0.11887196	-0.23554756	0.820526589	1	

Thy CD4⁺CD8⁺ T cells	EC50	n	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT + Empty vector	3.06E-06	5	-5.514	0.1099					
WT + Bcl-2	1.97E-06	5	-5.705	0.06129	0.125835107	-1.517859402	0.167528132	0.670112528	
Bim⁻/⁻ + Empty vector	> 4.00E-06	3	ND						Yes
Bim⁻/⁻ + Bcl-2	> 4.00E-06	3	ND						Yes
WT + Bcl-xL	> 4.00E-06	5	ND						Yes
WT + Bcl-w	> 4.00E-06	5	ND						Yes
WT + Mcl-1	> 4.00E-06	5	ND						Yes
Noxa⁻/⁻ + Empty vector	4.00E-06	4	-5.377	0.08288	0.144318695	0.949287964	0.374088117	1	
Noxa⁻/⁻ + Bcl-2	4.00E-06	4	-5.17	0.143	0.176928836	1.944284542	0.092946697	0.464733485	
Puma⁻/⁻ + Empty vector	2.65E-06	4	-5.576	0.04308	0.130232691	-0.476070943	0.648523755	1	
Puma⁻/⁻ + Bcl-2	3.97E-06	4	-5.401	0.05149	0.13256733	0.852397044	0.422196575	1	

Thy CD4⁺CD8⁻ T cells	EC50	n	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT + Empty vector	2.15E-06	5	-5.667	0.1043					
WT + Bcl-2	8.69E-07	5	-6.061	0.06391	0.122323252	-3.22097387	0.012221324	0.048885296	Yes
Bim⁻/⁻ + Empty vector	> 4.00E-06	3	ND						Yes
Bim⁻/⁻ + Bcl-2	> 4.00E-06	3	ND						Yes
WT + Bcl-xL	> 4.00E-06	5	ND						Yes
WT + Bcl-w	> 4.00E-06	5	ND						Yes
WT + Mcl-1	> 4.00E-06	5	ND						Yes
Noxa⁻/⁻ + Empty vector	1.00E-06	4	-5.998	0.08485	0.139787508	-2.367879684	0.049761154	0.099522308	
Noxa⁻/⁻ + Bcl-2	9.40E-07	4	-6.027	0.1101	0.152767454	-2.356522883	0.050599479	0.099522308	
Puma⁻/⁻ + Empty vector	8.17E-07	4	-6.088	0.08879	0.141662676	-2.971848424	0.020753277	0.062259831	
Puma⁻/⁻ + Bcl-2	3.13E-07	4	-6.505	0.06574	0.131607559	-6.367415417	0.000378868	0.00189434	Yes

Thy CD4⁻CD8⁺ T cells	EC50	n	LogEC50	Std. Error	se(x-wt)	t	Significance	Adjusted p-value	Signif.
WT + Empty vector	1.86E-07	5	-6.73	0.09431					
WT + Bcl-2	2.31E-07	5	-6.636	0.07925	0.123186601	0.763070005	0.467324319	0.92611669	
Bim⁻/⁻ + Empty vector	> 4.00E-06	3	ND						Yes
Bim⁻/⁻ + Bcl-2	> 4.00E-06	3	ND						Yes
WT + Bcl-xL	> 4.00E-06	5	ND						Yes
WT + Bcl-w	> 4.00E-06	5	ND						Yes
WT + Mcl-1	> 4.00E-06	5	ND						Yes
Noxa⁻/⁻ + Empty vector	2.39E-07	4	-6.623	0.09905	0.13785513	0.776177135	0.463058345	0.92611669	
Noxa⁻/⁻ + Bcl-2	4.47E-07	4	-6.349	0.1188	0.149409294	2.55004216	0.038101264	0.19050632	
Puma⁻/⁻ + Empty vector	1.28E-07	4	-6.893	0.07482	0.125515372	-1.298645717	0.235207231	0.705621693	