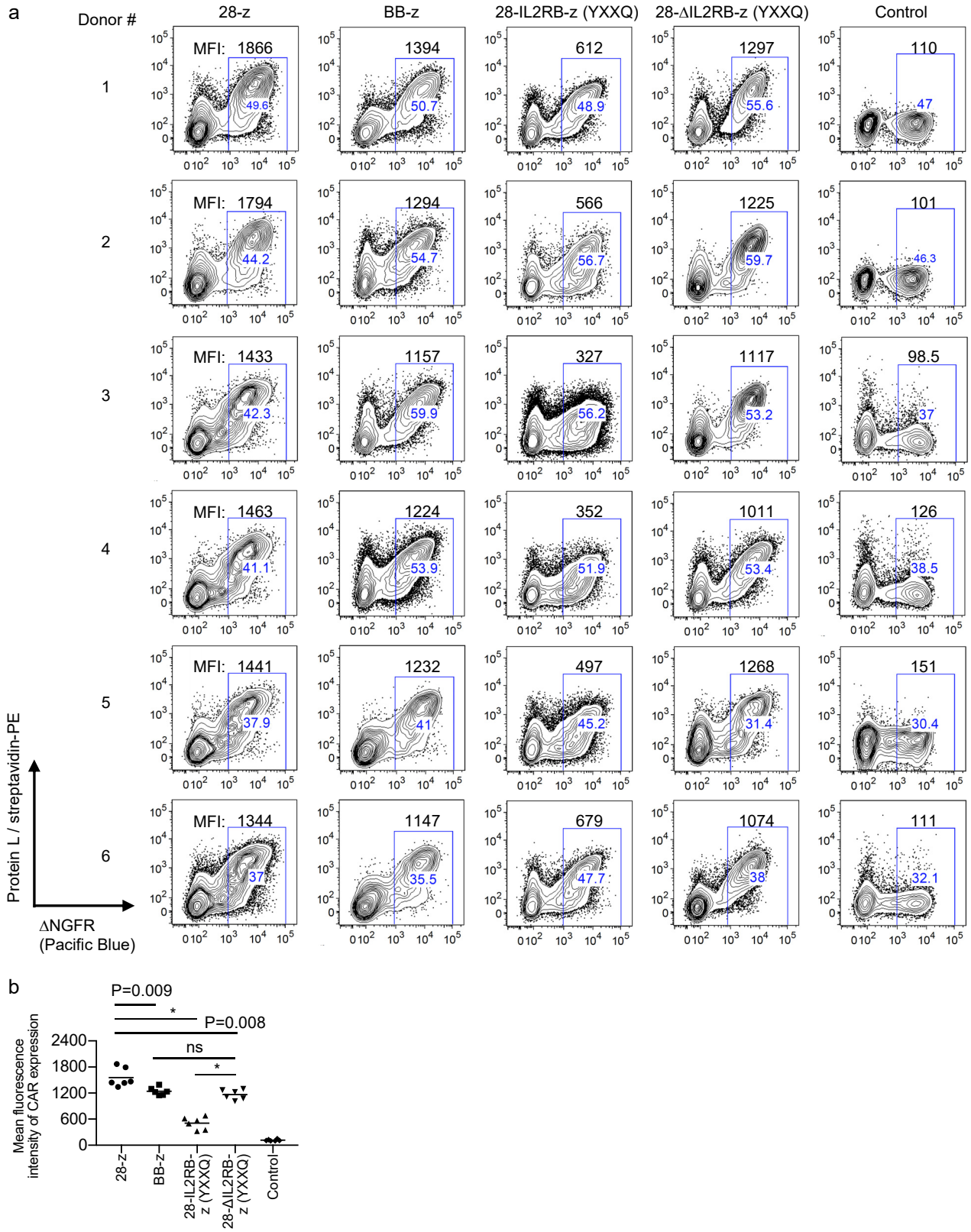
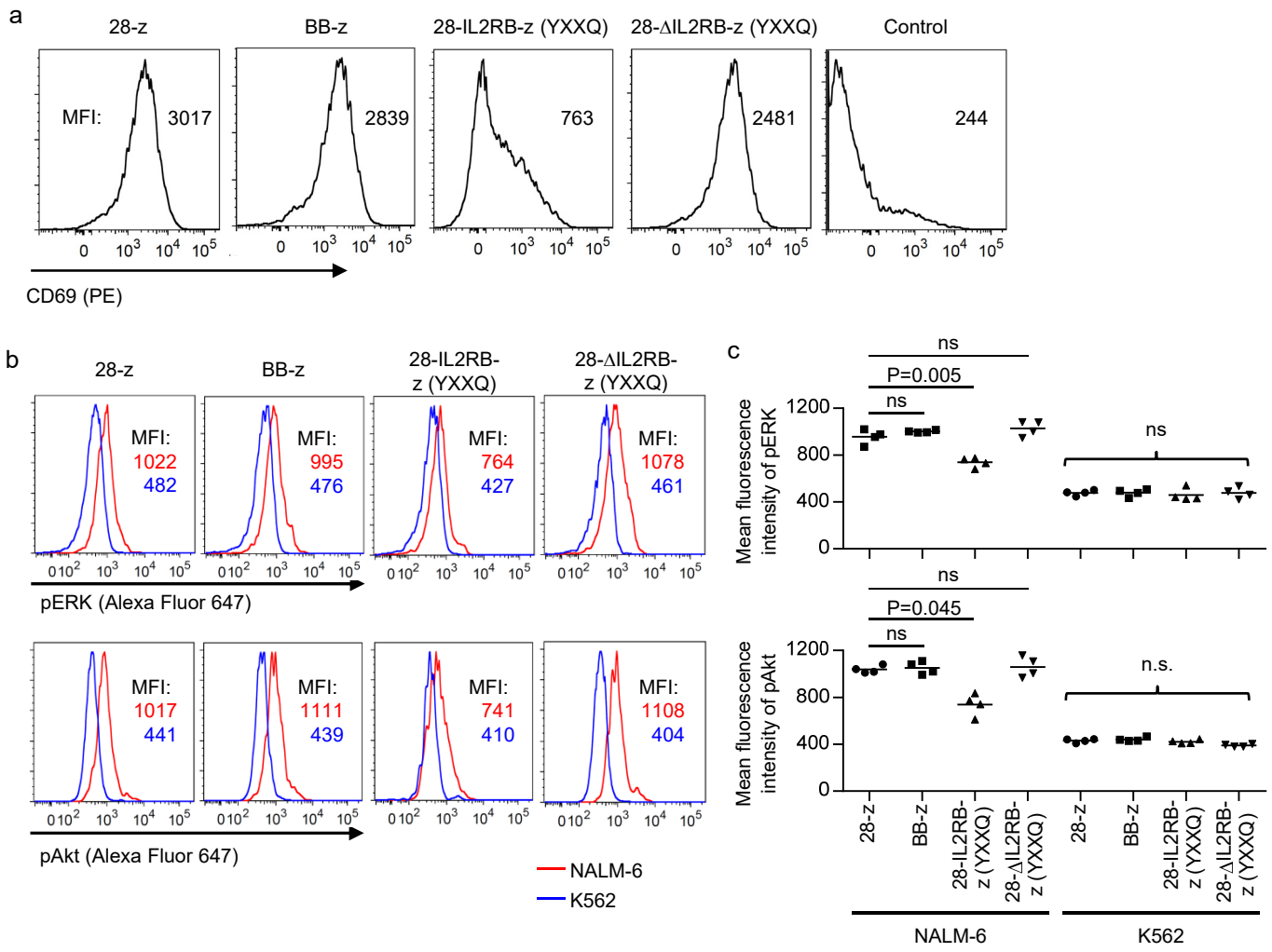
Supplementary Fig. 1



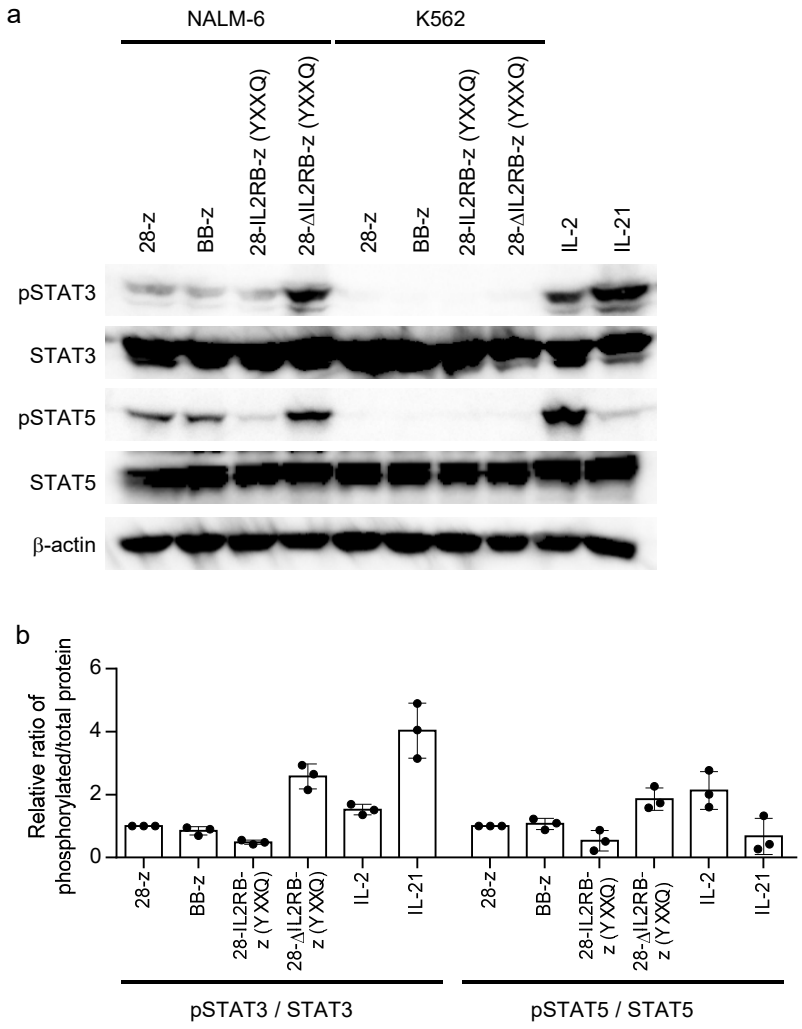
Supplementary Fig. 1. **Surface expression of CAR constructs.** (a, b) Peripheral blood CD3$^+$ T cells were individually transduced with a CAR gene linked to the truncated nerve growth factor receptor (ΔNGFR) or control ΔNGFR and stained with biotin-labeled protein L and streptavidin-PE to analyze the surface expression of the CARs. FACS plots obtained from six different donor-derived T cells (a) and the mean fluorescence intensity (MFI) in the CD8$^+$ ΔNGFR$^+$ T cell population (b) are shown (n=6 different donor samples). Horizontal lines indicate mean values. The MFI among different CAR constructs was analyzed with repeated measures one-way ANOVA with Tukey's multiple comparisons test; F=101.5; degree of freedom=23). * P<0.001, ns not significant.

Supplementary Fig. 2



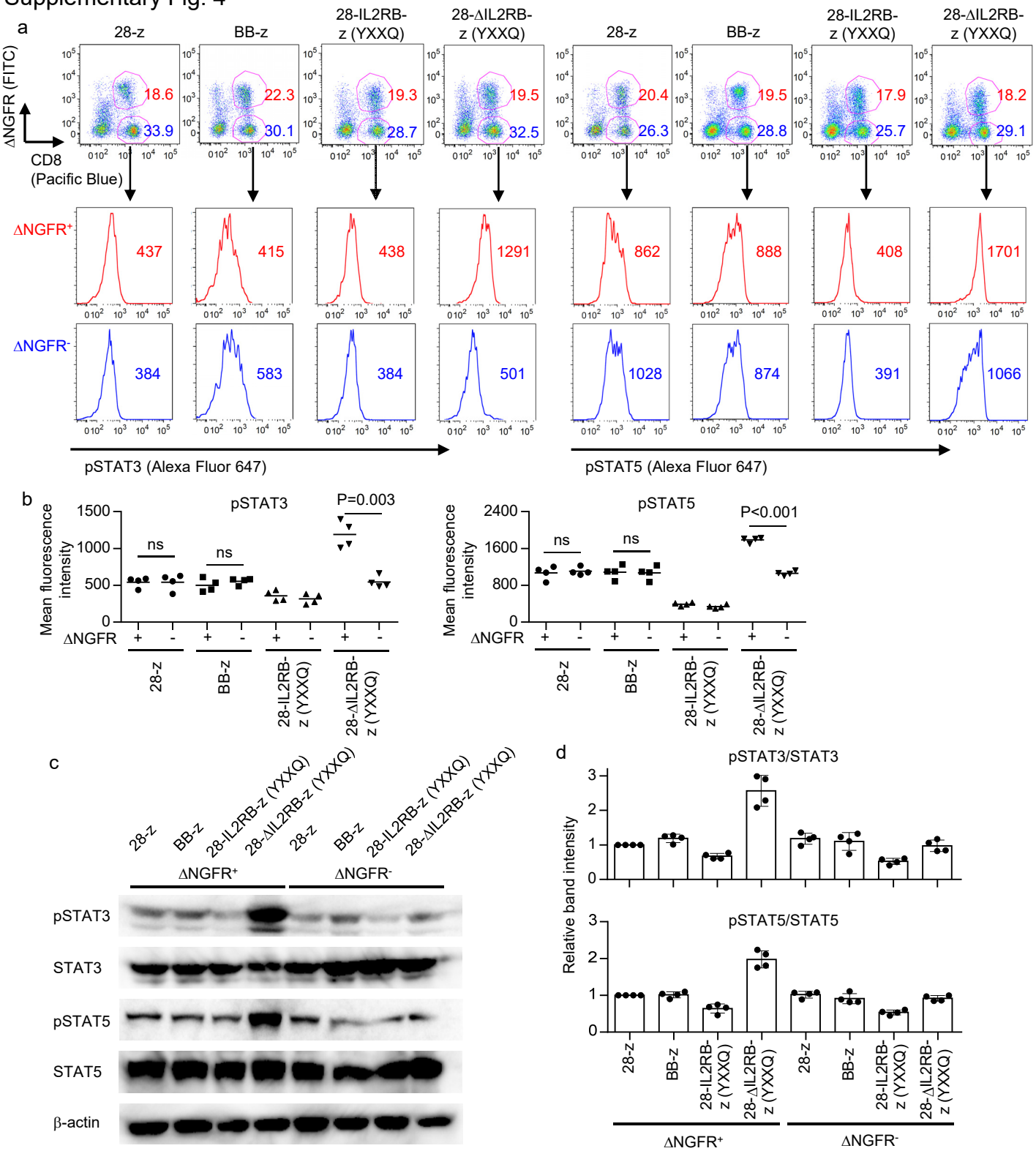
Supplementary Fig. 2. **Comparison of CAR signaling upon antigen recognition.** (a) Peripheral blood $CD3^+$ T cells were individually transduced with a CAR gene linked to the truncated nerve growth factor receptor (ΔNGFR) or control ΔNGFR. CD69 expression in the CAR-transduced T cells was analyzed 24 hours after stimulation with the $CD19^+$ cell line NALM-6. Representative FACS plots of three experiments are shown. (b, c) T cells transduced with the indicated CAR genes were stimulated with NALM-6 ($CD19^+$) or K562 ($CD19^-$) for 2 hours after resting overnight in cytokine-free media. Phosphorylated ERK and Akt within the $CD8^+$ $\Delta NGFR^+$ T cell population were analyzed with intracellular flow cytometry. Representative FACS plots (d) and the MFI (e) within the $CD8^+$ $\Delta NGFR^+$ T cell population are shown (n=4 different donor samples; repeated measures one-way ANOVA with Tukey's multiple comparisons test; F=35.54 for pERK and F=25.86 for pAkt; degree of freedom=15 for each comparison). Horizontal lines represent mean values. ns, not significant.

Supplementary Fig. 3



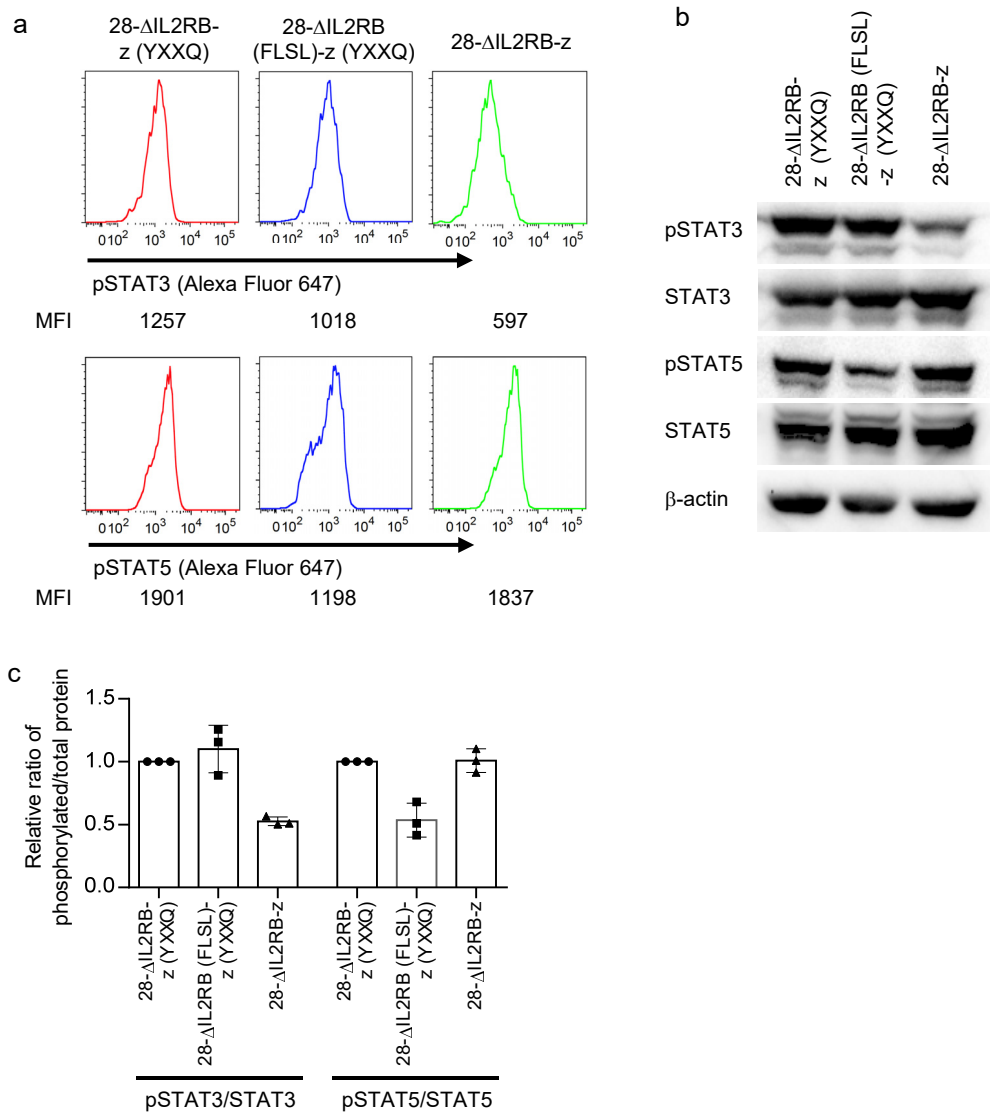
Supplementary Fig. 3. **JAK-STAT signaling induced by CAR-T cells.** (a, b) T cells transduced with the indicated CAR genes shown in Fig. 1a were stimulated with NALM-6 or K562 after resting in cytokine-free media overnight. The $\Delta NGFR^+$ T cells were isolated 2 hours after stimulation, and phosphorylated or total STAT3/STAT5 was detected by immunoblotting. T cells mock-transduced and treated with IL-2 (300 IU/ml) or IL-21 (50 ng/ml) for 30 minutes were used as a control. Representative blots of three independent experiments (a) and the quantified band intensity (b) are shown. The ratio of phosphorylated to total proteins was calculated and normalized to that of the 28-z CAR-T cells stimulated with NALM-6 (n=3). Horizontal lines indicate mean values ± s.d.

Supplementary Fig. 4



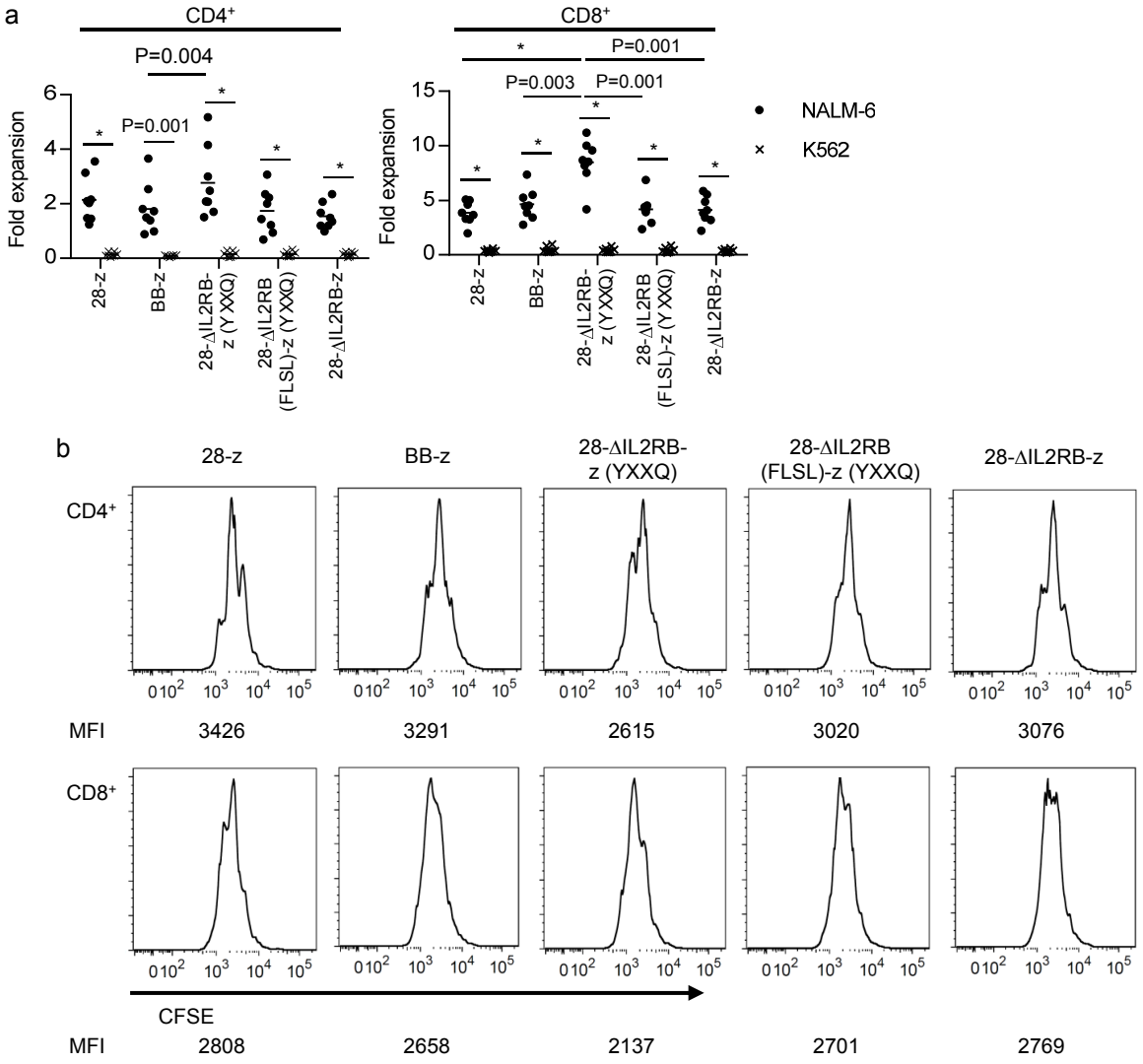
Supplementary Fig. 4. JAK-STAT pathway activation in CAR$^+$ and CAR$^-$ T cells. (a-d) CAR-T cells were stimulated with NALM-6 after resting overnight in cytokine-free media. The phosphorylation of STAT3 and STAT5 was analyzed 2 hours after stimulation by flow cytometry (a and b) and immunoblotting (c and d). (a) Representative FACS plots from the samples presented in Fig. 1b. (b) Mean fluorescence intensity of individual samples (n=4; paired two-tailed *t*-test; t=0.02 for 28-z-pSTAT3, t=1.29 for BB-z-pSTAT3, t=8.97 for 28-ΔIL2RB-z (YXXQ)-pSTAT3, t=0.74 for 28-z-pSTAT5, t=4.61 for BB-z-pSTAT5, t=17.99 for 28-ΔIL2RB-z (YXXQ)-pSTAT5, degree of freedom=3). Horizontal lines indicate mean values. For immunoblotting, ΔNGFR$^{+/-}$ CD8$^+$ T cells were isolated after stimulation by flow cytometry. Representative blots of four experiments (c) and the quantified band intensity normalized to that in 28-z CAR-T cells (d) are shown. Horizontal lines indicate mean values ± s.d. ns, not significant.

Supplementary Fig. 5



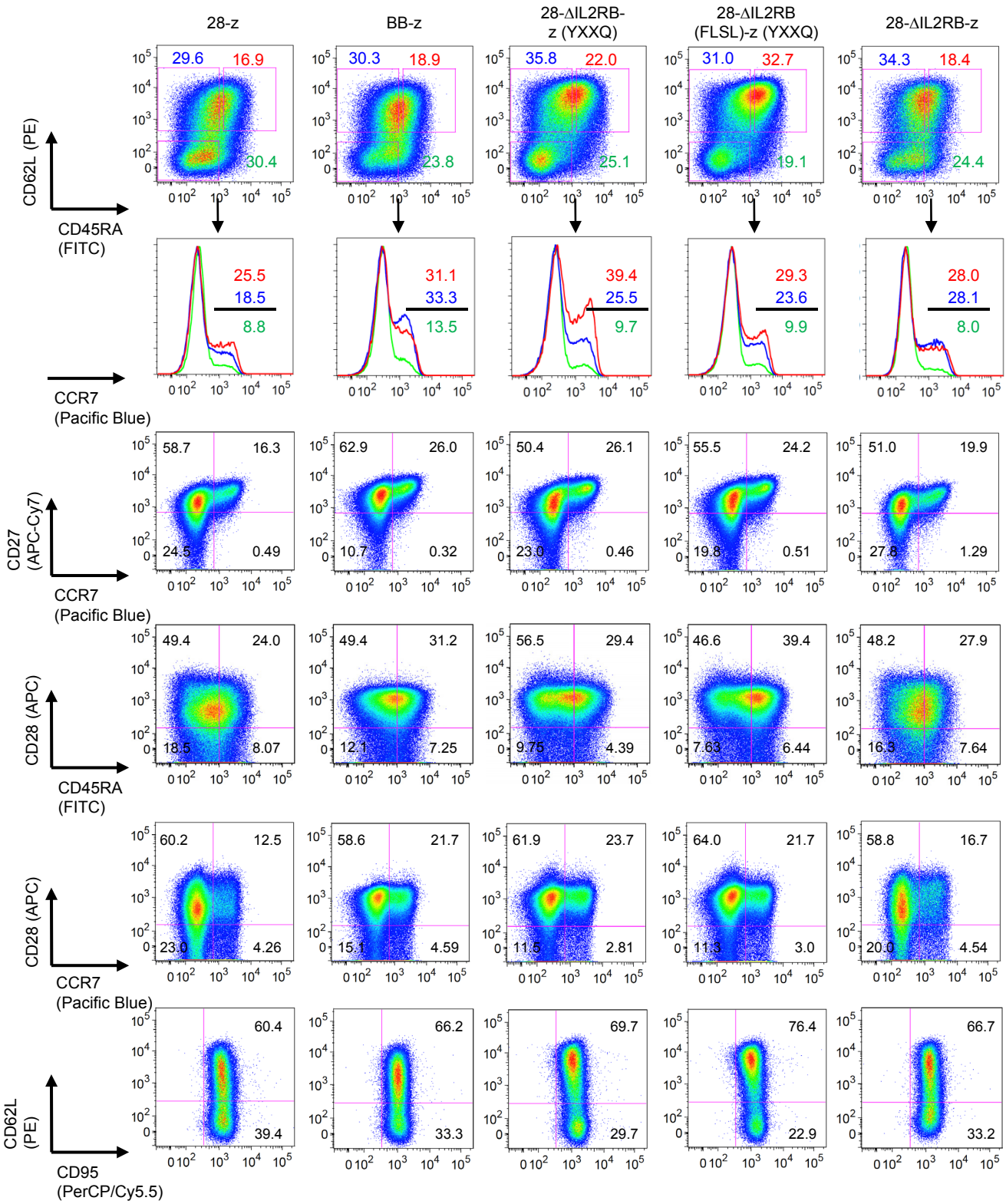
Supplementary Fig. 5. **Differential roles of tyrosine residues in inducing STAT3 and STAT5 phosphorylation.** (a-c) T cells transduced with the indicated CARs were stimulated with NALM-6. The phosphorylation levels of STAT3 and STAT5 were analyzed 2 hours after stimulation by intracellular flow cytometry (a) or immunoblotting (b and c). Immunoblotting was performed three times, and the quantified band intensity normalized to that of the 28-ΔIL2RB-z (YXXQ) CAR-T cells is shown (c). Horizontal lines indicate mean values ± s.d.

Supplementary Fig. 6



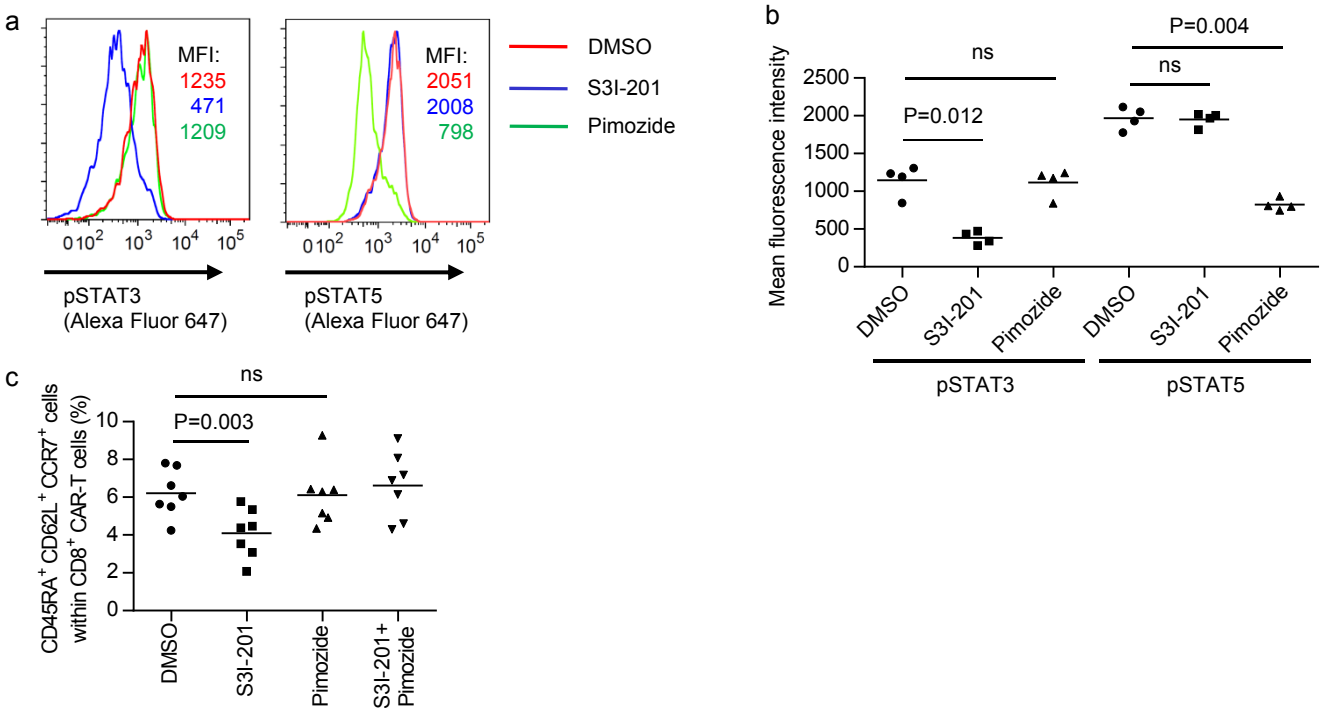
Supplementary Fig. 6. Proliferation of CAR-T cells. (a) T cells transduced with the indicated CAR genes were stimulated with NALM-6 or K562 and cultured in the absence of exogenous cytokines. Fold expansion of the CAR-T cells within $CD4^+$ or $CD8^+$ T cell population was analyzed 7 days after stimulation (n=8 different donor samples; repeated measures one-way ANOVA with Tukey's multiple comparisons test for the NALM-6 data, F=4.47 for $CD4^+$ T cells, F=30.84 for $CD8^+$ T cells, degree of freedom=39; two-tailed paired *t*-test for comparison between the NALM-6 and K562 data in the individual CAR-T cells, t=6.79 ($CD4^+$-28-z), t=5.32 (CD4+-BB-z), t=5.97 ($CD4^+$-28-ΔIL2RB-z (YXXQ)), t=5.58 ($CD4^+$-28-ΔIL2RB (FLSL)-z (YXXQ)), t=8.29 ($CD4^+$-28-ΔIL2RB-z), t=8.73 ($CD8^+$-28-z), t=7.36 ($CD8^+$-BB-z), t=10.08 ($CD8^+$-28-ΔIL2RB-z (YXXQ)), t=7.45 ($CD8^+$-28-ΔIL2RB (FLSL)-z (YXXQ)), t=7.93 ($CD8^+$-28-ΔIL2RB-z), degree of freedom=7). Horizontal lines denote mean values. * P<0.001. (b) CAR-T cells were labeled with carboxyfluorescein succinimidyl ester (CFSE) and stimulated with NALM-6. CFSE dilution within $CD4^+$/$CD8^+$ $\Delta NGFR^+$ T cell population was analyzed three days after the stimulation. Representative FACS plots of four samples are shown.

Supplementary Fig. 7



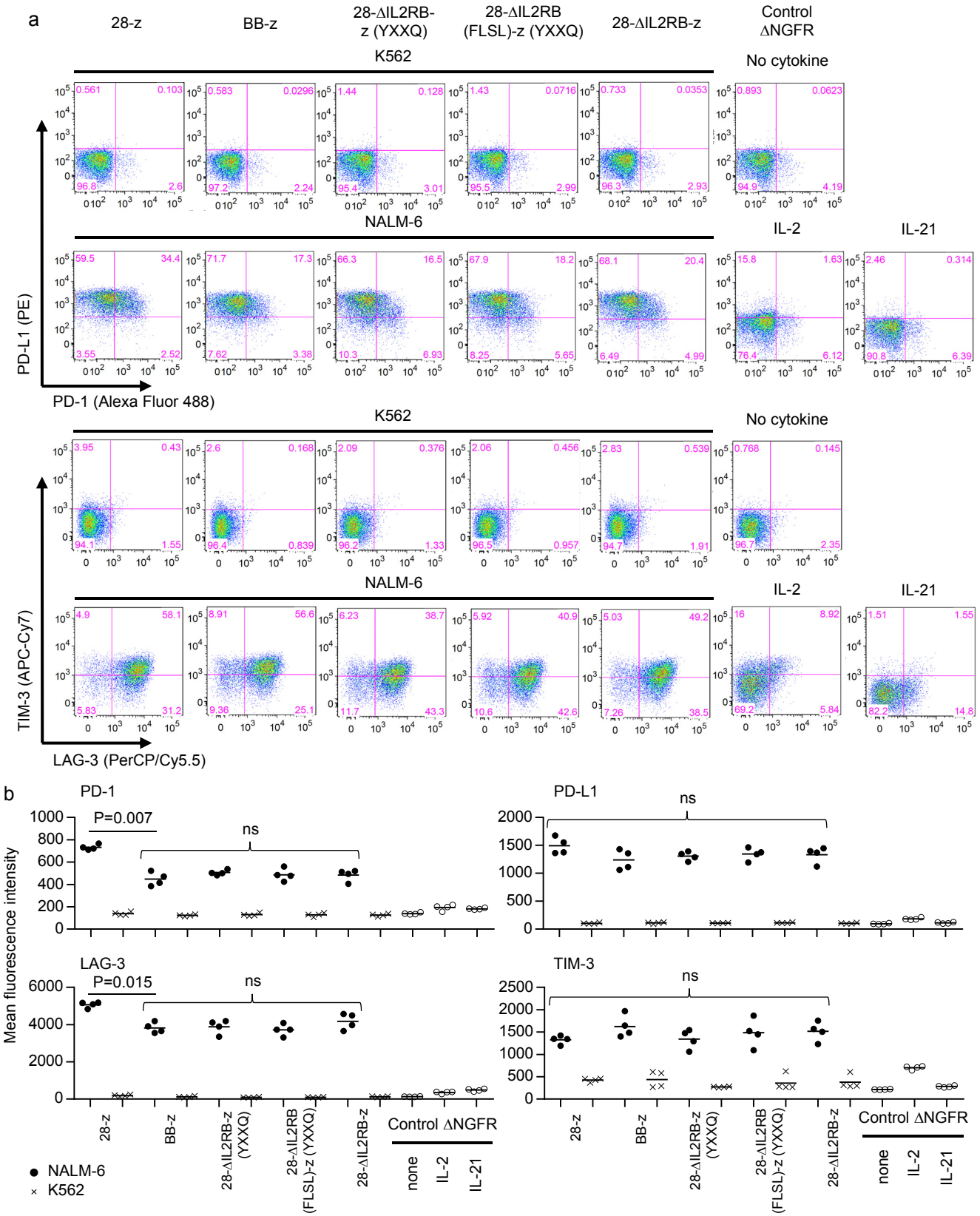
Supplementary Fig. 7. Expression of memory T cell markers in the CAR-transduced T cells. The expression of CD45RA, CD62L, CCR7, CD27, CD28 and CD95 was analyzed in the CAR-transduced $CD8^+$ T cells 7 days after stimulation with NALM-6. Representative FACS plots of the nine different donor samples presented in Fig. 2d are shown.

Supplementary Fig. 8



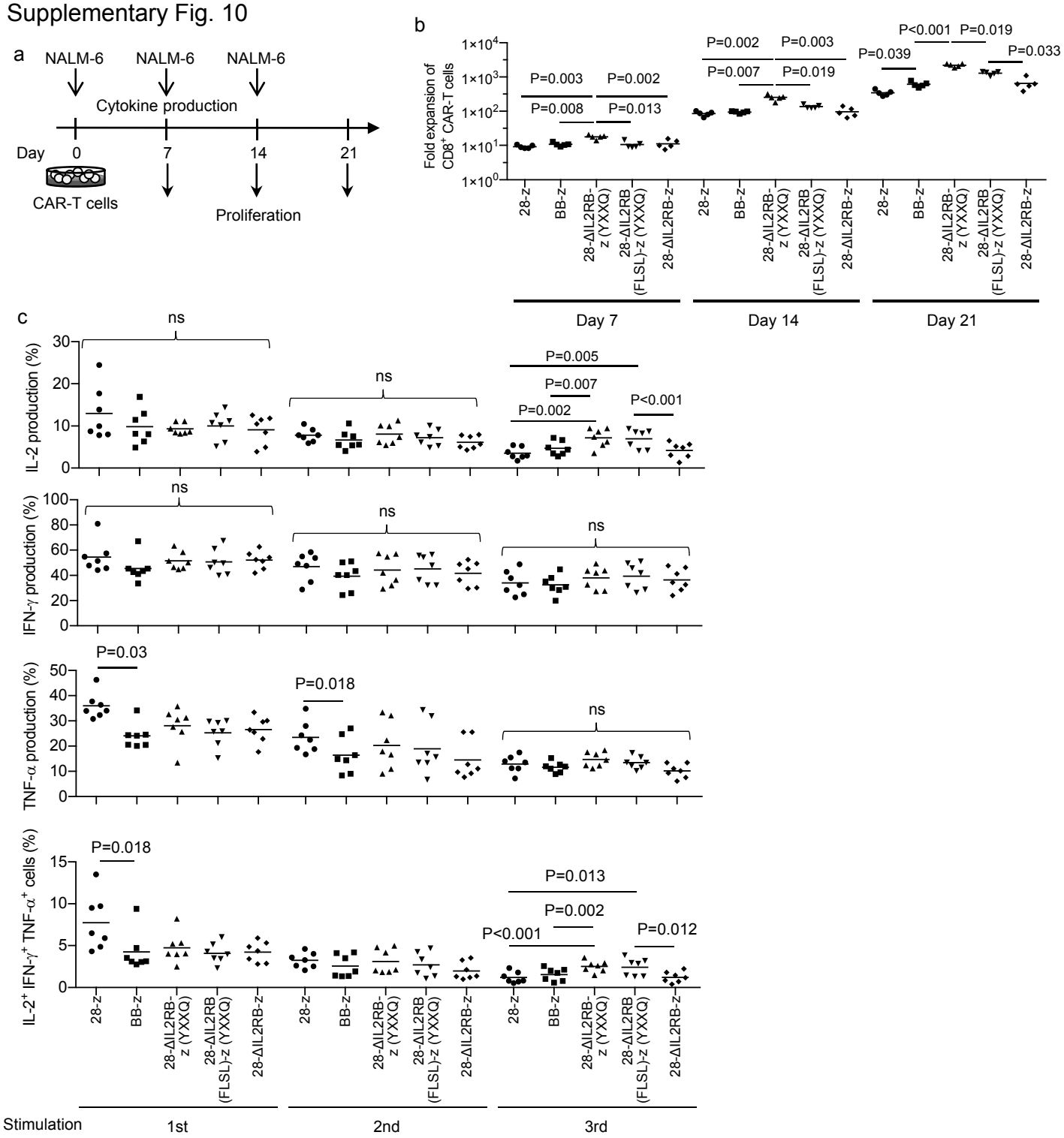
Supplementary Fig. 8. Specific inhibition of STAT3 and STAT5 phosphorylation. (a, b) The 28-ΔIL2RB-z (YXXQ) CAR-T cells were stimulated with NALM-6 in the presence or absence of 25 µM of S3I-201 or 5 µM of pimozide and were analyzed for the phosphorylation of STAT3 and STAT5 in the $CD8^+$ $\Delta NGFR^+$ T cell population 120 minutes after the stimulation. Representative FACS plots (a) and mean fluorescence intensity of pSTAT3 and pSTAT5 are shown (b, n=4 different donor samples; repeated measures one-way ANOVA with Tukey's multiple comparisons test; F=54.54 for pSTAT3 and F=115.8 for pSTAT5; degree of freedom=11). (c) The 28-ΔIL2RB-z (YXXQ) CAR-transduced T cells were stimulated with NALM-6 and were treated with 25 µM of S3I-201 and/or 5 µM of pimozide for three days. The frequency of $CD45RA^+$ $CD62L^+$ $CCR7^+$ cells within the $CD8^+$ $\Delta NGFR^+$ T cell population was analyzed on day 7 (n=7 different donor samples, repeated measures one-way ANOVA with Tukey's multiple comparisons test against the DMSO control; F=7.71; degree of freedom=27). In **b** and **c**, horizontal lines indicate mean values. ns, not significant.

Supplementary Fig. 9



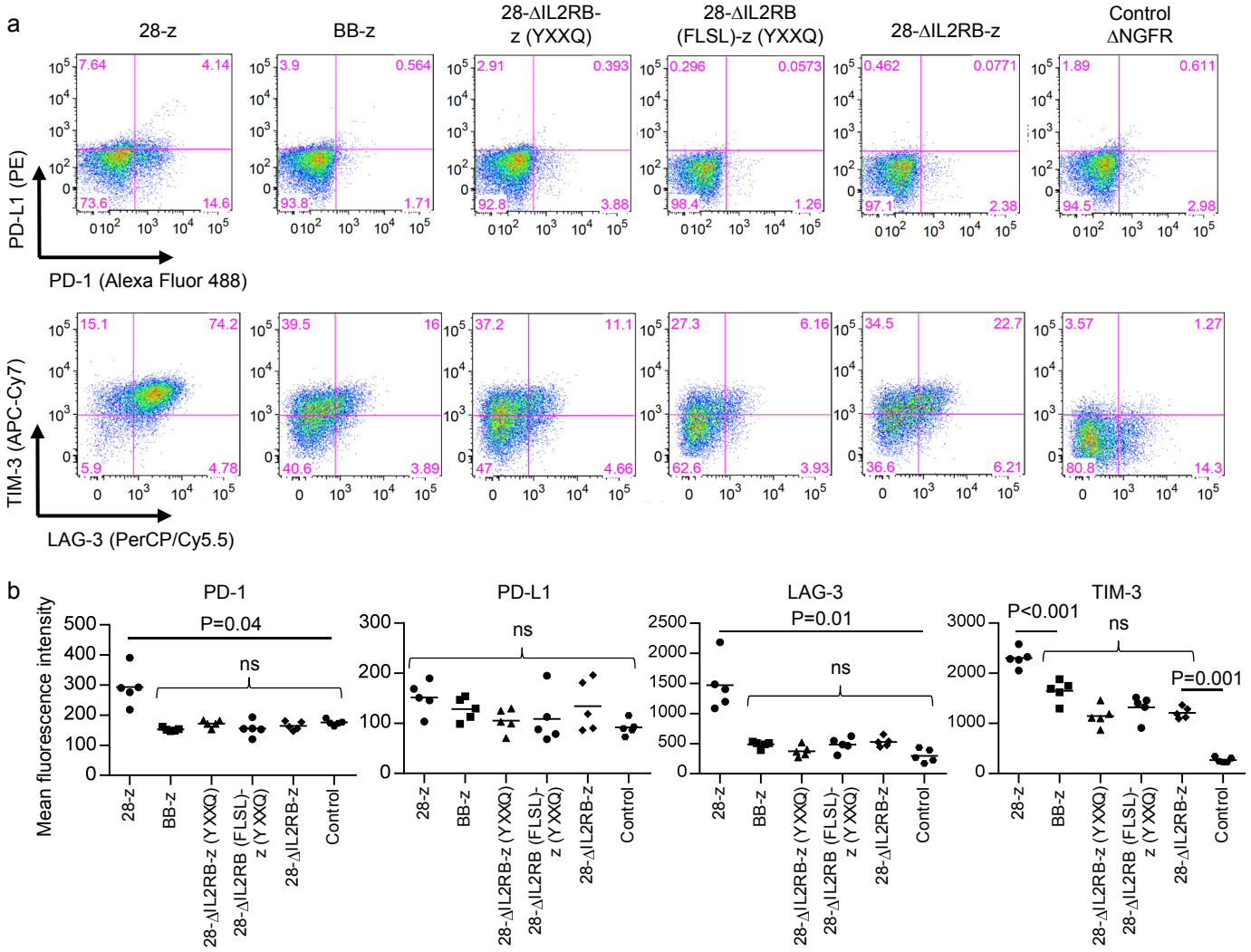
Supplementary Fig. 9. Expression of immunoinhibitory molecules in CAR-T cells upon antigen stimulation. The indicated CAR-T cells were cocultured with NALM-6 or K562, or T cells transduced with the control ΔNGFR were treated with IL-2 (300 IU/ml) or IL-21 (50 ng/ml). The expression of PD-1, PD-L1, LAG-3 and TIM-3 was analyzed 24 hours later. Representative FACS plots (a) and the mean fluorescence intensity (b) are shown (n=4; repeated measures one-way ANOVA with Tukey's multiple comparisons test for the data for activated CAR-T cells; F=22.8 for PD-1, F=1.52 for PD-L1, F=16.66 for LAG-3, F=2.28 for TIM-3; degree of freedom=19). ns, not significant. Horizontal lines indicate mean values.

Supplementary Fig. 10



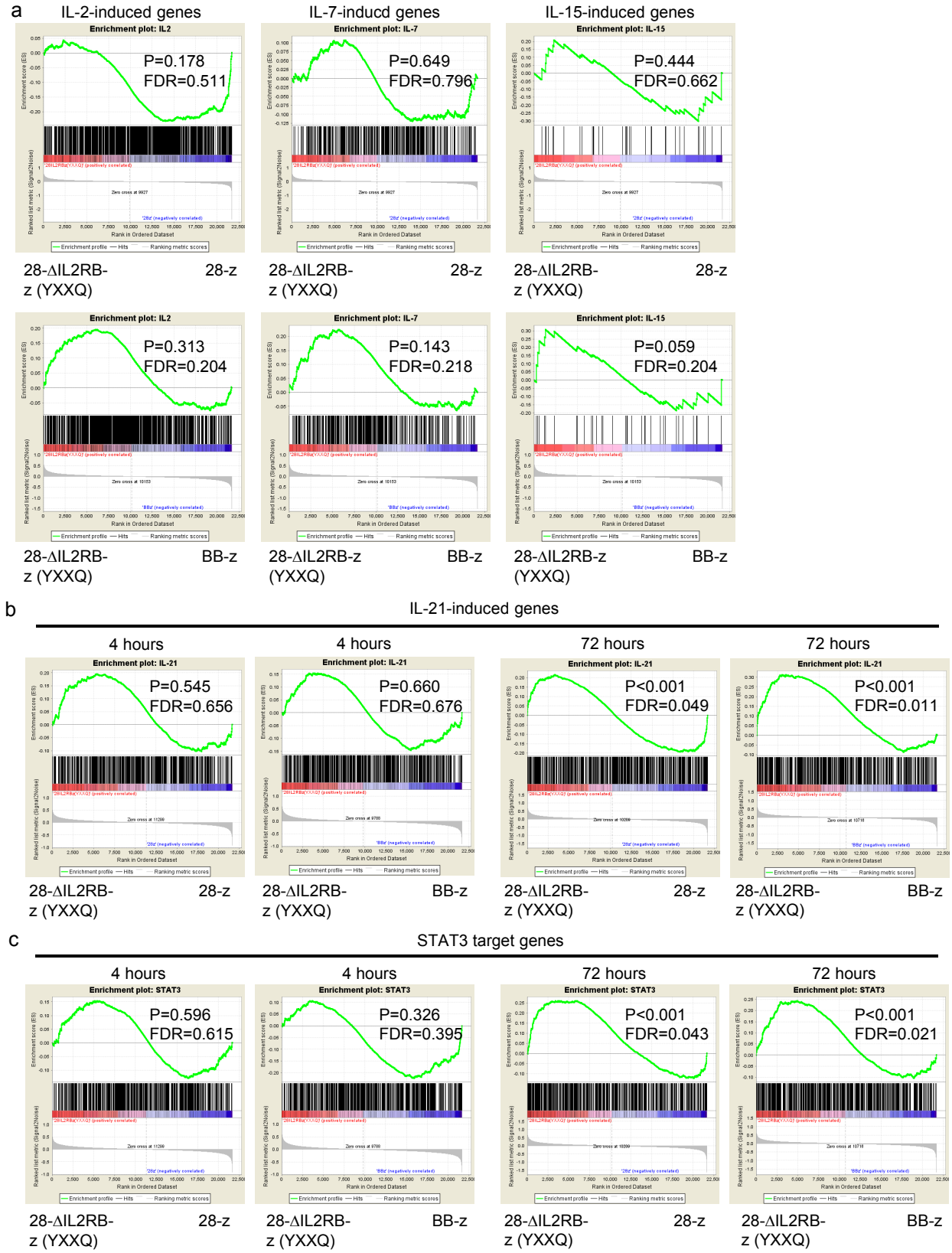
Supplementary Fig. 10. Proliferation and cytokine production in the CAR-transduced T cells upon repeated antigen stimulation. (a-c) The CAR-transduced T cells were stimulated weekly with NALM-6 (a). The fold expansion of the $CD8^+$ CAR-T cells at 7, 14 and 21 days after the initial stimulation was calculated (b; n=5 different donor samples, repeated measures one-way ANOVA with Tukey's multiple comparisons test; F=26.41 for Day 7, F=52.27 for Day 14, F=83.83 for Day 21; degree of freedom=24). (c) The production of IL-2, IFN-γ and TNF-α was analyzed by intracellular flow cytometry after each stimulation. The frequency of the cells producing individual cytokines and those positive for all cytokines within the $CD8^+$ $\Delta NGFR^+$ T cell population are shown (n=7 different donor samples, repeated measures one-way ANOVA with Tukey's multiple comparisons test for each round of stimulation; F=2.10 (IL-2-1st), 2.57 (IL-2-2nd), 27.04 (IL-2-3rd), 2.54 (IFN-γ-1st), 2.57 (IFN-γ-2nd), 2.66 (IFN-γ-3rd), 6.95 (TNF-α-1st), 7.17 (TNF-α-2nd), 3.09 (TNF-α-3rd), 4.44 ($IL\text{-}2^+$ $IFN\text{-}\gamma^+$ $TNF\text{-}\alpha^+$-1st), 4.87 ($IL\text{-}2^+$ $IFN\text{-}\gamma^+$ $TNF\text{-}\alpha^+$-2nd)), 24.71 ($IL\text{-}2^+$ $IFN\text{-}\gamma^+$ $TNF\text{-}\alpha^+$-3rd); degree of freedom=34). ns, not significant. Horizontal lines indicate mean values.

Supplementary Fig. 11



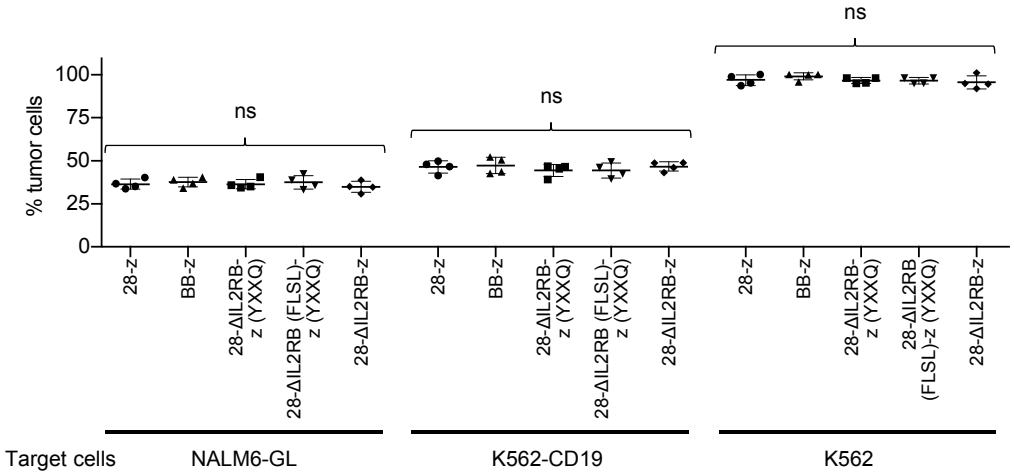
Supplementary Fig. 11. Expression profiles of exhaustion markers in CAR-T cells after repeated antigen stimulation. (a, b) CAR-T cells were stimulated weekly with NALM-6. Expression profiles of PD-1, PD-L1, LAG-3 and TIM-3 in $CD8^+$ CAR-T cells 7 days after the third stimulation were analyzed by flow cytometry. Representative FACS plots (a) and mean fluorescence intensity (b) are shown (n=5 different donor samples, repeated measures one-way ANOVA with Tukey's multiple comparisons test; F=16.17 for PD-1, F=2.97 for PD-L1, F=31.35 for LAG-3, F=56.36 for TIM-3; degree of freedom=29). ns, not significant. Horizontal lines indicate mean values.

Supplementary Fig. 12



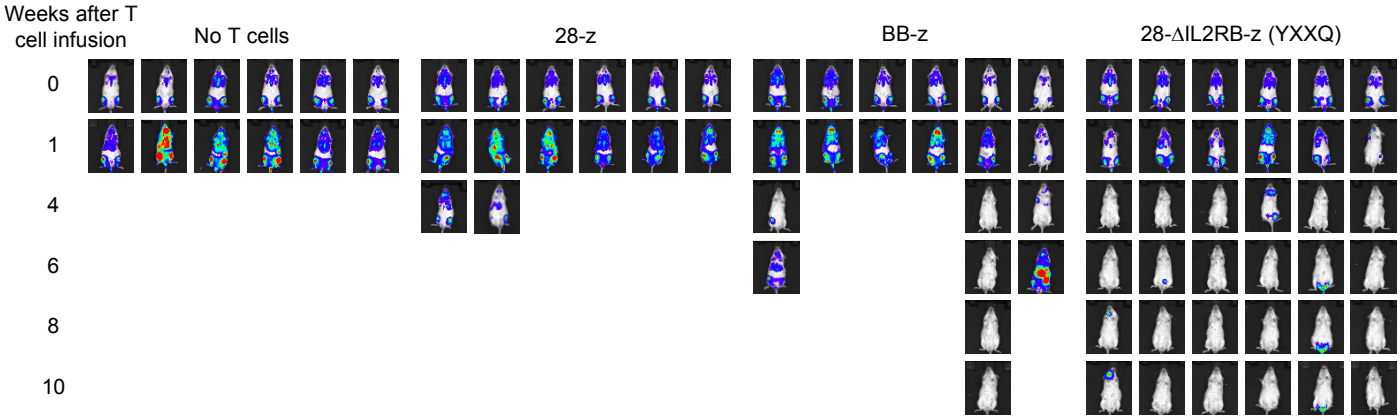
Supplementary Fig. 12. Gene expression profiles of the stimulated CAR-T cells. (a) Gene set enrichment analysis (GSEA) comparing the expression profiles of the 28-ΔIL2RB-z CAR-T cells versus the 28-z or BB-z CAR-T cells stimulated with NALM-6 for 24 hours (n=4 different donor samples for each group). Genes induced by IL-2, IL-7 or IL-15 treatment were used as the gene sets. (b, c) GSEA of IL-21-induced gene (b) and STAT3 target genes (c) comparing 28-ΔIL2RB-z CAR-T cells and 28-z/BB-z CAR-T cells stimulated for 4 or 72 hours. A nominal P value for enrichment was calculated by a permutation test, and a false discovery rate (FDR) was calculated to adjust for multiple hypothesis testing.

Supplementary Fig. 13



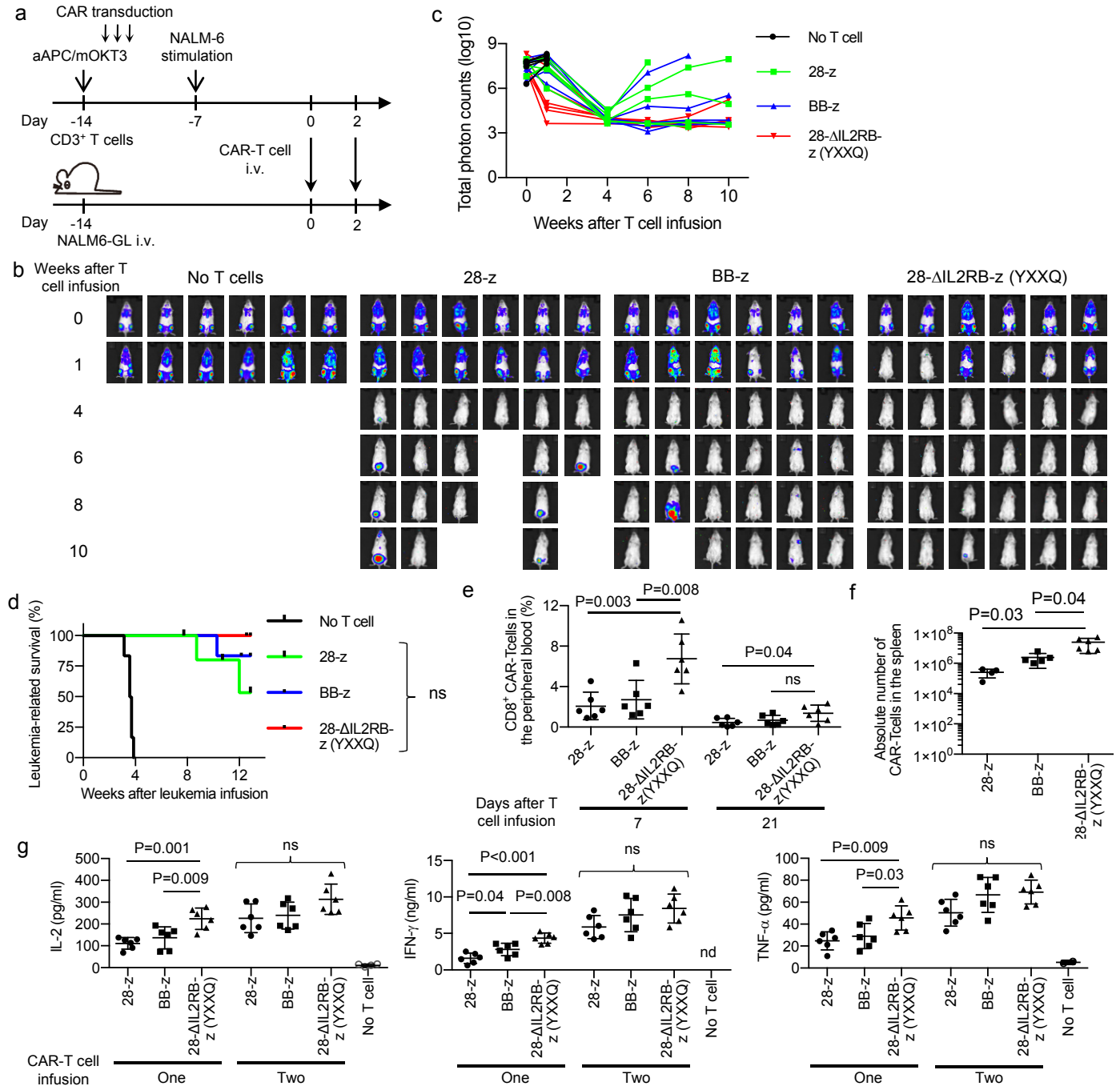
Supplementary Fig. 13. Cytotoxic activity of CAR-T cells. The CAR-transduced T cells were cocultured with the indicated target cells at a ratio of 1:1. The frequency of the residual target cells was determined by flow cytometry (n=4 technical replicates; ordinary one-way ANOVA with Tukey's multiple comparisons test for each target cell; F=0.48 for NALM6-GL, 0.49 for K562-CD19, 0.90 for K562; degree of freedom=19). ns, not significant. Horizontal lines indicate mean values ± s.d.

Supplementary Fig. 14



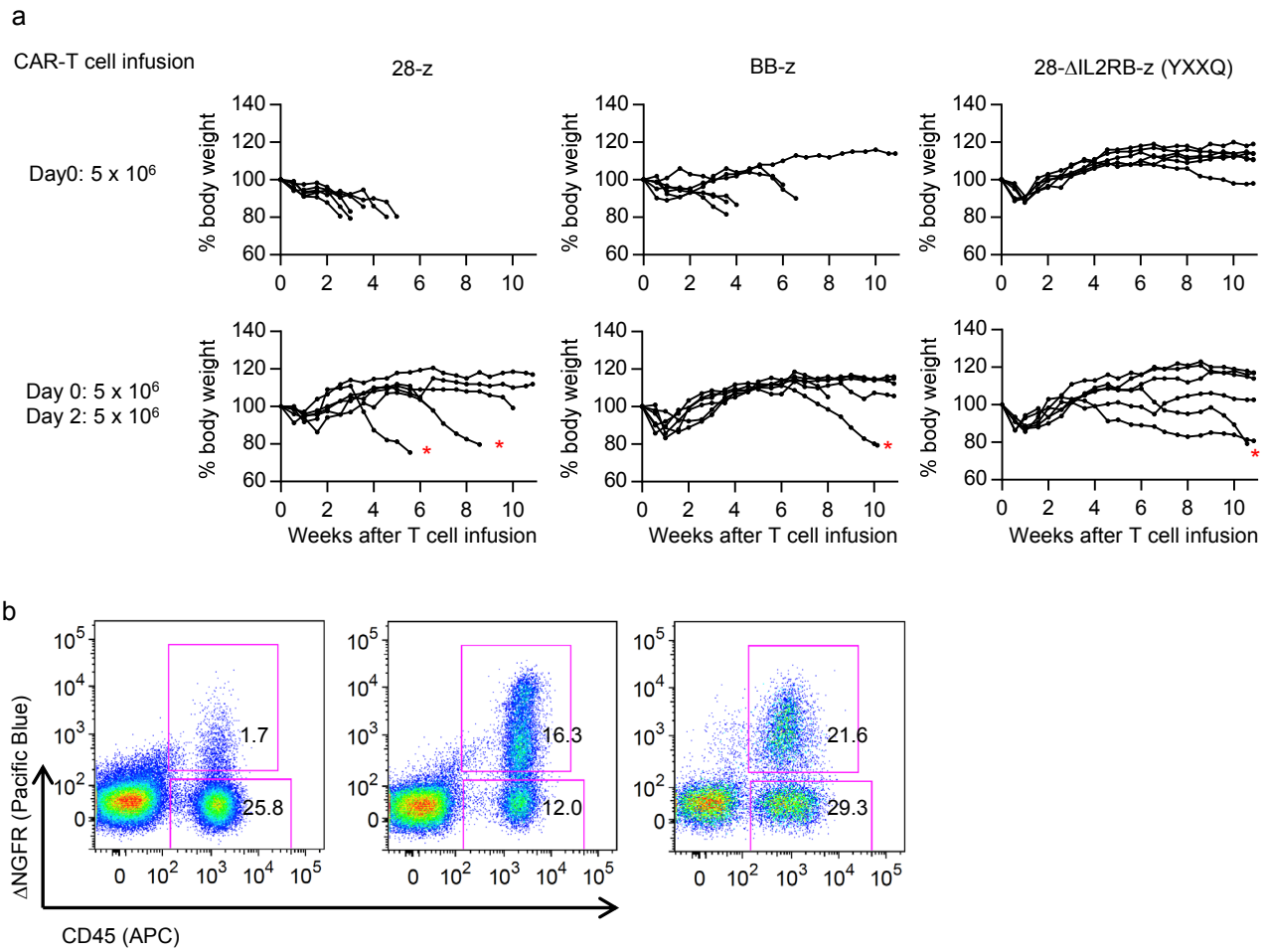
Supplementary Fig. 14. Antileukemic effects of the CAR-T cells *in vivo*. NOD-scid IL2rγ^{null} (NSG) mice were intravenously injected with the CD19^{+} leukemia cell line NALM-6 transduced with EGFP-luciferase (NALM6-GL) and were treated with 5x10^{6} CAR-T cells 14 days later. *In vivo* bioluminescent imaging of luciferase activity following the infusion of the CAR-T cells is shown.

Supplementary Fig. 15



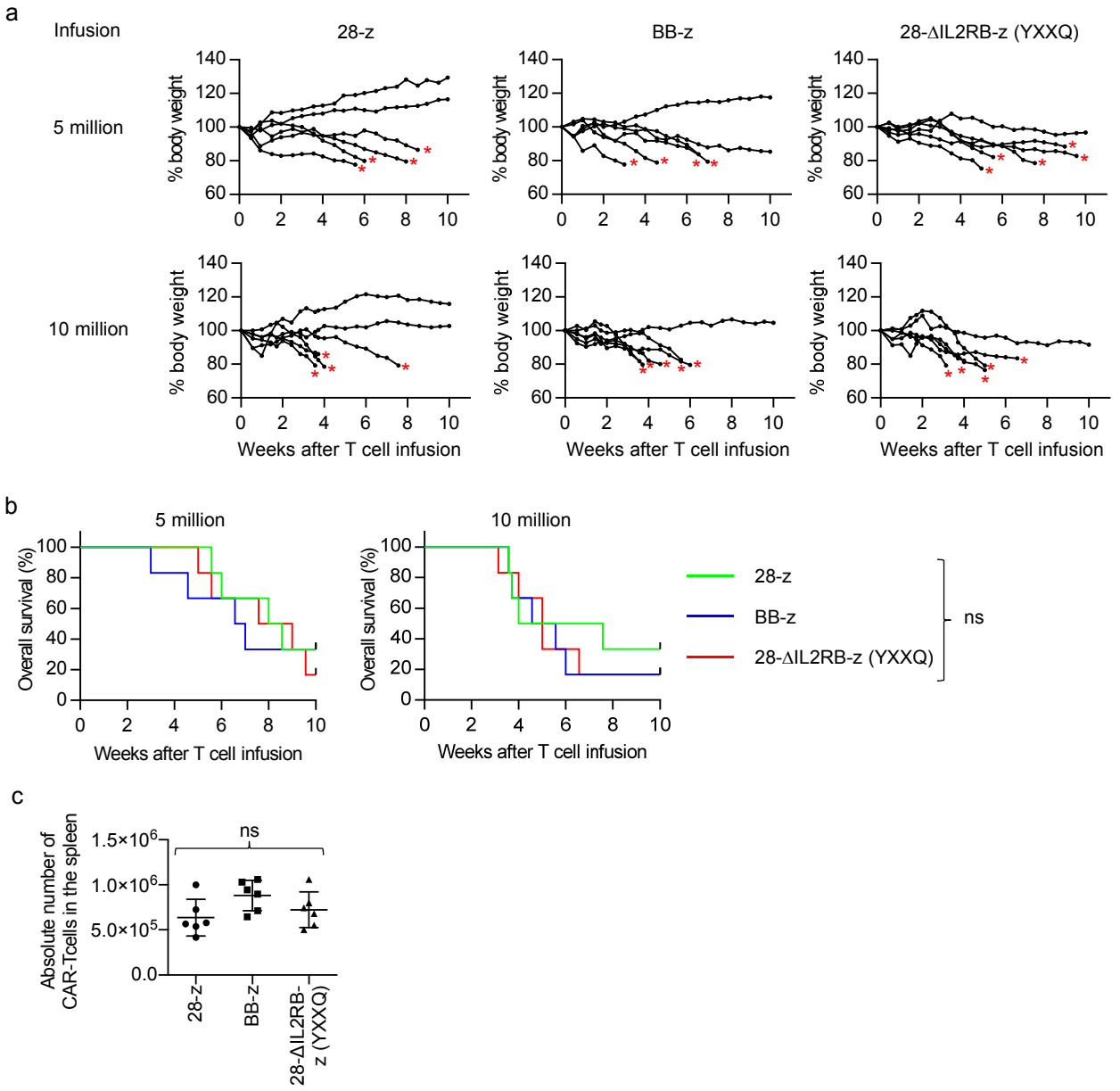
Supplementary Fig. 15. Improved therapeutic effects of CAR-T cells by dose escalation. (a) NOD-scid IL2rγ^{null} (NSG) mice were intravenously infused with the NALM6-GL and treated with two infusions of the 5x10^6 CAR-T cells. (b, c) Leukemia progression was monitored by *in vivo* bioluminescent imaging of luciferase activity. Individual images (b) and the quantified total photon counts (c) are shown (n=6 mice for each group). (d) Kaplan–Meier curve for leukemia-related survival of the mice (n=6 mice for each group, log-rank test). The mice that died of xenogeneic graft-versus-host disease (GVHD) were censored at the time of death. See Supplementary Table 3 for detailed information. (e) The frequency of CD8$^+$ CAR-T cells in the peripheral blood (n=6; ordinary one-way ANOVA with Tukey's multiple comparisons test; F=10.0 for Day 7, F=3.92 for Day 21; degree of freedom=17). (f) The absolute number of CAR-T cells persisting within the spleen was analyzed at the time of lethal GVHD or on 90 days after leukemia infusion (n=4 for 28z, n=5 for BB-z, n=6 for 28-ΔIL2RB-z (YXXQ); ordinary one-way ANOVA with Tukey's multiple comparisons test; F=5.72; degree of freedom=14). The data in **d-f** are representative of two experiments. (g) Serum was collected from the mice 4 days after the first CAR-T cell infusion, and the concentrations of IL-2, IFN-γ and TNF-α were measured using an enzyme-linked immunosorbent assay (n=6 for each CAR group; ordinary one-way ANOVA with Tukey's multiple comparisons test; F=11.16 (IL-2-one), 3.03 (IL-2-two), 20.01 (IFN-γ-one), 2.57 (IFN-γ-two), 6.84 (TNF-α-one), 3.59 (TNF-α-two); degree of freedom=17). IL-2, IFN-γ, and TNF-α were not detected in 8, 12, and 10, respectively, of the 12 No-T cell samples. ns, not significant; nd, not detected. In **e-g**, horizontal lines indicate mean values ± s.d.

Supplementary Fig. 16



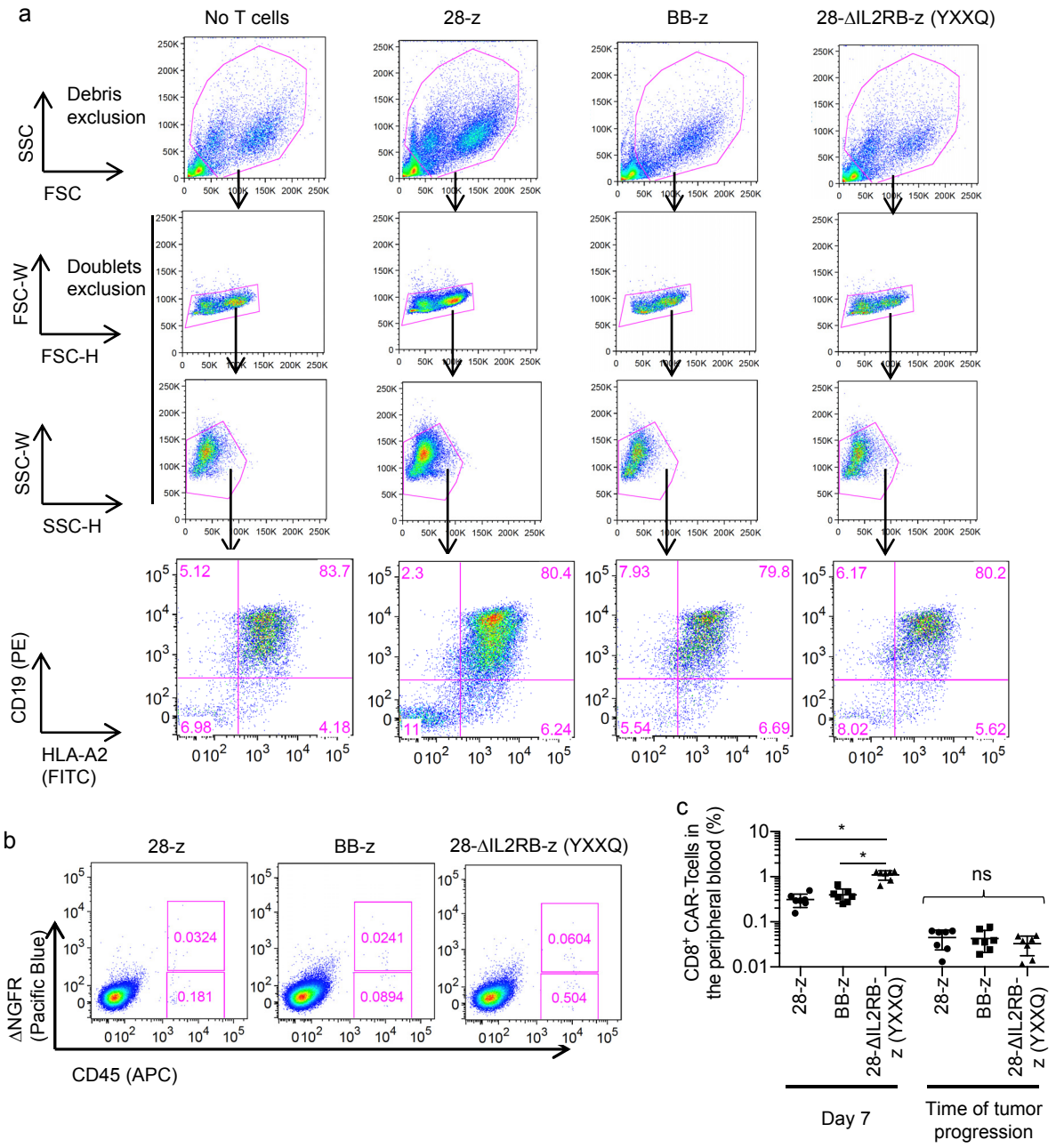
Supplementary Fig. 16. The development of xenogeneic graft-versus-host disease (GVHD) by CAR-T cells after leukemia eradication. (a) Serial weight monitoring of NALM-6-bearing mice infused with the indicated number of CAR-T cells (n=6 mice for each group). Relative body weight compared with the weights prior to T cell infusion are shown. The development of lethal GVHD is denoted by *. (b) Persistence of CAR-T cells within the spleen of the mice that received two infusions of $5x10^6$ CAR-T cells was analyzed at the time of lethal GVHD or at 90 days after leukemia infusion. Representative FACS plots analyzing $CD45^+$ $\Delta NGFR^{+/-}$ cells within the spleen of 6 mice for each group are shown.

Supplementary Fig. 17



Supplementary Fig. 17. The development of xenogeneic graft-versus-host disease by CAR-T cells in the absence of antigen. Tumor-free NSG mice were irradiated with 1.5 Gy, and transplanted with 5 or 10 million of CAR-T cells. (a) Serial weight monitoring of the mice. Relative body weights compared with the weights prior to T cell infusion are shown. The development of lethal GVHD is denoted by * (n=6 mice for each group). (b) Overall survival of the mice transplanted with CAR-T cells (n=6 mice for each group, log-rank test). (c) Tumor-free NSG mice were irradiated with 1.5 Gy and adoptively transferred with $5x10^6$ CAR-T cells. The mice were sacrificed 14 days after T cell infusion, and the absolute number of the CAR-T cells within the spleen was analyzed (n=6 mice; ordinary one-way ANOVA with Tukey's multiple comparisons test; F=2.54; degree of freedom=17). Representative of two experiments. ns, not significant. Horizontal lines indicate mean values ± s.d.

Supplementary Fig. 18



Supplementary Fig. 18. Relapse of the melanoma cell line A375-CD19 after treatment with CAR-transduced T cells. (a, b) NSG mice were subcutaneously injected with A375 melanoma cells transduced with CD19 (A375-CD19) (day -21) and infused with $5x10^5$ CAR-T cells on day 0 and 4. The mice were sacrificed when the tumor size exceeded 300 mm^3. (a) Progressing tumor cells were analyzed for CD19 expression. Cells were co-stained with HLA-A2 to discriminate the A375-CD19 tumor cells. (b) Persistence of the CAR-T cells within the tumor was analyzed when the tumor size exceeded 300 mm^3. In **a** and **b**, representative FACS plots from seven mice in each group are shown. (c) The frequency of $CD8^+$ CAR-T cells in the peripheral blood 7 days after CAR-T cell infusion or at the time the tumor mass exceeded 300 mm^3 (n=7 mice; ordinary one-way ANOVA with Tukey's multiple comparisons test for each time point; F=40.19 for Day 7, F=0.71 for Time of tumor progression; degree of freedom=20). * P<0.001. ns, not significant. Horizontal lines indicate mean values ± s.d.

Supplementary Table 1. Amino acid sequencing of the CAR signaling domains used in this study.

28-z	IEVMYPPPYLDNEKSNGTIIHVKGKHLCPSPLFPGPSKPFWVLVVVGGVLAC YSLLVTVAFIIFWVRSKRSRLLHSDYMNMTPRRPGPTRKHYQPYAPPRDFA AYRSRVKFSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEM GGKPRRKNPQEGLYNELQKDKMAEAYSEIGMKGERRRGKGHDGLYQGLS TATKDTYDALHMQALPPR	Blue: CD28 Black: CD3z
BB-z	TTTPAPRPPTPAPTIASQPLSLRPEACRPAAGGAVHTRGLDFACDIYIWAPL AGTCGVLLLSLVITLYCKRGRKKLLYIFKQPFMRPVQTTQEEDGCSCRFPEE EEGGCELPRVKFSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGR DPEMGGKPRRKNPQEGLYNELQKDKMAEAYSEIGMKGERRRGKGHDGLY QGLSTATKDTYDALHMQALPPR	Black: CD8α Green: 4-1BB Black: CD3z
28-IL2RB-z (YXXQ)	IEVMYPPPYLDNEKSNGTIIHVKGKHLCPSPLFPGPSKPFWVLVVVGGVLAC YSLLVTVAFIIFWVRSKRSRLLHSDYMNMTPRRPGPTRKHYQPYAPPRDFA AYRSNCRNTGPWLKKVLKCNTPDPSKFFSQLSSEHGGDVQKWLSSPFPS SSFSPGGLAPEISPLEVLERDKVTQLLLQQDKVPEPASLSSNHSLTSCFTNQ GYFFFHLPDALEIEACQVYFTYDPYSEEDPDEGVAGAPTGSSPQPLQPLSG EDDAYCTFPSRDDLLLFSPSLLGGPSPPSTAPGGSGAGEERMPPSLQERV PRDWDPQPLGPPTPGVPDLVDFQPPPELVLREAGEEVPDAGPREGVSFP WSRPPGQGEFRALNARLPLNTDAYLSLQELQGQDPTHLVRVKFSRSADAP AYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRKNPQEGLY NELQKDKMAEAYSEIGMKGERRRGKGHDGLYQGLSTATKDTYDAYRHQA LPPR	Blue: CD28 Red: IL2RB Black: CD3z with YXXQ
28-ΔIL2RB-z (YXXQ)	IEVMYPPPYLDNEKSNGTIIHVKGKHLCPSPLFPGPSKPFWVLVVVGGVLAC YSLLVTVAFIIFWVRSKRSRLLHSDYMNMTPRRPGPTRKHYQPYAPPRDFA AYRSNCRNTGPWLKKVLKCNTPDPSKFFSQLSSEHGGDVQKWLSSPFPS SSFSPGGLAPEISPLEVLERDKVTQLLPLNTDAYLSLQELQGQDPTHLVRVK FSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRK NPQEGLYNELQKDKMAEAYSEIGMKGERRRGKGHDGLYQGLSTATKDTY DAYRHQALPPR	Blue: CD28 Red: IL2RB with internal deletion Black: CD3z with YXXQ
28-ΔIL2RB (FLSL)-z (YXXQ)	IEVMYPPPYLDNEKSNGTIIHVKGKHLCPSPLFPGPSKPFWVLVVVGGVLAC YSLLVTVAFIIFWVRSKRSRLLHSDYMNMTPRRPGPTRKHYQPYAPPRDFA AYRSNCRNTGPWLKKVLKCNTPDPSKFFSQLSSEHGGDVQKWLSSPFPS SSFSPGGLAPEISPLEVLERDKVTQLLPLNTDAFLSLQELQGQDPTHLVRVK FSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRK NPQEGLYNELQKDKMAEAYSEIGMKGERRRGKGHDGLYQGLSTATKDTY DAYRHQALPPR	Blue: CD28 Red: IL2RB with internal deletion and FLSL Black: CD3z with YXXQ
28-ΔIL2RB-z	IEVMYPPPYLDNEKSNGTIIHVKGKHLCPSPLFPGPSKPFWVLVVVGGVLAC YSLLVTVAFIIFWVRSKRSRLLHSDYMNMTPRRPGPTRKHYQPYAPPRDFA AYRSNCRNTGPWLKKVLKCNTPDPSKFFSQLSSEHGGDVQKWLSSPFPS SSFSPGGLAPEISPLEVLERDKVTQLLPLNTDAYLSLQELQGQDPTHLVRVK FSRSADAPAYQQGQNQLYNELNLGRREEYDVLDKRRGRDPEMGGKPRRK NPQEGLYNELQKDKMAEAYSEIGMKGERRRGKGHDGLYQGLSTATKDTY DALHMQALPPR	Blue: CD28 Red: IL2RB with internal deletion Black: CD3z

Supplementary Table 2. Differentially expressed genes in different CAR-T cells at the indicated time points (P<0.01 with repeated measures one-way ANOVA, and fold change >1.5 or <-1.5). IL-21-induced genes, STAT3 target genes and genes included in both gene sets are highlighted in red, blue and green, respectively.

4 hours after NALM-6 stimulaiton (356 genes)														
		Fold Change					Fold Change					Fold Change		
Genes	P-value	28z vs BBz	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz	Genes	P-value	28z vs BBz	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz	Genes	P-value	28z vs BBz	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz
BATF3	0.0015	1.3	1.43	1.86	*CLECL1*	0.0009	1.41	1.24	1.75	*ABCB1*	0.0087	1.5	-1.15	1.31
TWSG1	0.0061	1.05	1.5	1.58	*KCNA3*	0.0015	1.08	1.43	1.55	*IL31*	0.0051	2.73	-1.58	1.72
MFSD2A	0.0003	1.73	1.04	1.8	*MIR548C*	0.0094	1.72	1.09	1.87	*CTDSP2*	0.0093	-1.75	1.4	-1.26
PRDM1	0.0046	1.32	1.17	1.54	*FIGNL1*	0.0027	-1.04	1.51	1.45	*CATSPERB*	0.0005	1.93	-1.33	1.45
NKG7	0.0034	1.27	1.18	1.5	*KAT2B*	0.0052	1.51	1.17	1.76	*WRAP53*	0.0044	-1.52	1.28	-1.18
CTLA4	0.0003	2.09	1.75	3.65	*ELL2*	0.0055	1.43	1.2	1.72	*SKA1*	0.0019	-1.96	1.44	-1.36
SEC61A2	0.0014	1.05	1.75	1.83	*POFUT1*	0.0014	1.31	1.26	1.65	*TTK*	0.0066	-1.6	1.3	-1.23
METRNL	0.0063	1.29	1.44	1.86	*ST8SIA4*	0.0020	1.31	1.26	1.65	*LINC00892*	0.0030	1.61	-1.24	1.3
GPR132	0.0000	-1.05	1.69	1.6	*ADAM8*	0.0014	1.09	1.39	1.51	*FSCN1*	0.0091	-1.6	1.29	-1.24
ABTB2	0.0001	1.77	1.12	1.99	*INPP4B*	0.0006	1.34	1.24	1.66	*RMI1*	0.0006	-1.86	1.39	-1.34
CYTIP	0.0009	1.07	1.4	1.5	*OAS2*	0.0018	-1.27	1.61	1.26	*ALG10*	0.0056	-1.69	1.32	-1.28
JAK3	0.0058	-1.19	1.54	1.29	*MIR1471*	0.0068	-1.74	1.82	1.04	*GOLGA8DP*	0.0054	1.61	-1.25	1.29
MLLT6	0.0007	1.2	1.27	1.53	*MYO1G*	0.0029	-1.2	1.55	1.29	*IL2*	0.0067	1.65	-1.27	1.3
RORA	0.0011	1.29	1.2	1.56	*PIK3R5*	0.0003	1.45	1.15	1.67	*AGFG2*	0.0011	-1.5	1.23	-1.21
BATF	0.0069	1.32	1.42	1.87	*ANTXR2*	0.0002	1.29	1.22	1.57	*NUDT6*	0.0043	-1.53	1.24	-1.24
ICOS	0.0024	1.07	1.48	1.58	*HAPLN3*	0.0021	-1.18	1.51	1.28	*HLA-DRA*	0.0044	-2.65	1.61	-1.65
KIF3A	0.0034	-1.42	1.69	1.19	*MT1CP*	0.0053	-1.2	1.52	1.27	*CHEK1*	0.0011	-1.57	1.23	-1.27
IL5	0.0005	2.03	1.85	3.76	*SEC24D*	0.0006	1.17	1.28	1.5	*CD74*	0.0028	-1.53	1.21	-1.27
LOC101928173	0.0006	2.07	1.61	3.33	*MDFIC*	0.0008	1.38	1.17	1.6	*FAM90A10P*	0.0047	1.53	-1.27	1.21
SH3BP5	0.0023	1.22	2.12	2.58	*PIM2*	0.0004	1.42	1.14	1.63	*PRIM1*	0.0076	-1.68	1.26	-1.33
MAF	0.0000	1.41	1.8	2.54	*SEC31B*	0.0050	1.26	1.22	1.54	*PTTG3P*	0.0033	1.54	-1.29	1.2
APOL1	0.0008	1.4	1.8	2.51	*CD83*	0.0000	1.51	1.09	1.65	*CBX5*	0.0008	-1.52	1.18	-1.28
CD86	0.0003	1.59	1.62	2.56	*MX1*	0.0079	1.23	1.23	1.51	*HLA-DPA1*	0.0098	-1.54	1.19	-1.3
CCR4	0.0002	-1.16	2.16	1.87	*LOC101929531*	0.0016	-1.25	1.51	1.21	*C7orf31*	0.0058	-1.66	1.23	-1.35
MSC	0.0005	1.53	1.58	2.42	*SLC7A11*	0.0078	1.23	1.22	1.5	*GPR87*	0.0060	2.66	-1.7	1.57
FAM46C	0.0003	1.29	1.73	2.24	*SGPL1*	0.0011	1.42	1.11	1.57	*RFC4*	0.0039	-1.8	1.27	-1.41
RCAN2	0.0054	1.44	1.61	2.32	*ACOX3*	0.0019	1.45	1.09	1.58	*CENPU*	0.0003	-1.5	1.16	-1.3
IL22	0.0001	1.63	1.45	2.36	*TRPS1*	0.0071	1.31	1.16	1.51	*IL1R1*	0.0067	1.51	-1.3	1.16
APOL2	0.0016	1.44	1.56	2.24	*LOC105373723*	0.0017	1.53	1.05	1.61	*DHCR24*	0.0019	-1.79	1.26	-1.42
SYTL3	0.0004	1.35	1.61	2.17	*CST7*	0.0054	1.31	1.15	1.51	*NCAPH*	0.0007	-1.74	1.24	-1.4
TOX	0.0027	1.22	1.71	2.07	*LOC341056*	0.0097	-1.41	1.55	1.1	*CTTNBP2NL*	0.0045	-1.61	1.19	-1.35
GZMH	0.0000	1.58	1.46	2.31	*MAML2*	0.0046	1.43	1.09	1.56	*ANLN*	0.0013	-1.73	1.22	-1.41
DDX60	0.0014	1.04	1.82	1.9	*LMNB1*	0.0027	-1.34	1.52	1.13	*E2F1*	0.0072	-1.67	1.18	-1.41
C10orf128	0.0008	1.82	1.29	2.35	*TPI1P3*	0.0040	1.32	1.14	1.5	*FOXM1*	0.0043	-1.5	1.11	-1.35
TNFRSF8	0.0024	1.04	1.77	1.85	*ADRB2*	0.0063	1.4	1.1	1.53	*VTRNA1-2*	0.0080	1.69	-1.43	1.18
FCRL3	0.0013	1.45	1.47	2.12	*LOC101929536*	0.0023	-1.38	1.52	1.1	*MIR4773-2*	0.0015	1.56	-1.39	1.13
NUGGC	0.0011	1.02	1.74	1.78	*SLC41A2*	0.0028	1.46	1.06	1.55	*BRIP1*	0.0061	-1.56	1.12	-1.39
IL6R	0.0023	1.3	1.52	1.98	*UBXN10*	0.0091	-1.39	1.5	1.08	*ITGAV*	0.0069	1.58	-1.4	1.13
LY96	0.0021	1.19	1.58	1.88	*SOD2*	0.0044	1.47	1.03	1.52	*MTX3*	0.0002	1.83	-1.5	1.21
LAMP3	0.0004	1.48	1.39	2.07	*LOC105376626*	0.0000	2.9	-1.04	2.78	*TPX2*	0.0006	-1.75	1.18	-1.48
INSIG1	0.0000	1.62	1.32	2.13	*ITGA2*	0.0013	2.12	-1.04	2.04	*LGALS9B*	0.0039	-1.57	1.11	-1.42
HERC6	0.0062	-1.05	1.72	1.65	*MCOLN2*	0.0029	2.04	-1.03	1.98	*GTSE1*	0.0064	-1.99	1.26	-1.58
PDE4DIP	0.0054	1.26	1.49	1.88	*LOC105372752*	0.0046	2.41	-1.21	2	*HIST1H3G*	0.0043	-1.79	1.19	-1.51
PROK2	0.0003	2.14	1.06	2.28	*FNDC9*	0.0023	1.73	-1.02	1.71	*ECT2*	0.0001	-1.72	1.16	-1.48
FGFBP2	0.0013	1.5	1.31	1.97	*MIR222*	0.0021	2.11	-1.15	1.83	*GCNT1*	0.0021	1.98	-1.58	1.25
LTA	0.0001	1.31	1.42	1.86	*IL4*	0.0043	1.82	-1.05	1.73	*MIR4310*	0.0031	-1.66	1.13	-1.47
ADGRG1	0.0019	1.09	1.54	1.68	*KLF3*	0.0062	1.52	-1.01	1.51	*NDC80*	0.0069	-1.66	1.13	-1.47
STRIP2	0.0015	1.99	1.07	2.12	*TGFBR3*	0.0098	1.63	-1.06	1.55	*CDC20*	0.0009	-1.64	1.12	-1.47
F5	0.0038	1.59	1.23	1.96	*TNF*	0.0002	1.8	-1.15	1.56	*CCL20*	0.0001	2.45	-1.75	1.4
GALNT3	0.0000	1.37	1.34	1.84	*NIPA1*	0.0014	1.8	-1.17	1.54	*PLK1*	0.0023	-1.86	1.2	-1.55
GSAP	0.0037	1.31	1.37	1.79	*PLEK*	0.0008	2.13	-1.29	1.66	*CKAP2*	0.0014	-1.58	1.09	-1.45
TRGV2	0.0082	1.21	1.42	1.73	*B3GNT5*	0.0010	1.57	-1.08	1.45	*KIAA1841*	0.0074	-1.96	1.23	-1.59
EOMES	0.0011	1.18	1.44	1.7	*LOC105379052*	0.0088	1.61	-1.1	1.47	*BIRC5*	0.0003	-1.76	1.15	-1.53
RASA2	0.0025	1.15	1.46	1.68	*LINC00861*	0.0076	1.61	-1.11	1.44	*NUSAP1*	0.0009	-1.71	1.12	-1.52
LIMA1	0.0012	1.17	1.44	1.69	*CCL3L3*	0.0007	1.71	-1.16	1.47	*SCCPDH*	0.0045	-1.55	1.06	-1.46
TMEM173	0.0071	-1.12	1.65	1.48	*PIGV*	0.0041	1.53	-1.1	1.39	*UBE2C*	0.0100	-1.5	1.04	-1.45
MIR4326	0.0072	1.96	1.05	2.07	*ZNF280D*	0.0093	-1.54	1.39	-1.11	*ACAT2*	0.0094	-1.51	1.03	-1.47
MIR518A1	0.0037	-1.08	1.62	1.5	*CDC42EP3*	0.0036	1.85	-1.24	1.5	*DTL*	0.0029	-1.54	1.04	-1.48
LOC101927902	0.0005	1.21	1.41	1.71	*MIR96*	0.0078	1.63	-1.16	1.4	*CENPE*	0.0004	-1.68	1.09	-1.54
CD274	0.0002	1.39	1.28	1.78	*BCL9L*	0.0082	-1.63	1.4	-1.17	*MTBP*	0.0009	-1.64	1.07	-1.54
EPAS1	0.0019	1.28	1.34	1.71	*PTPN6*	0.0043	-1.69	1.42	-1.19	*NCAPG2*	0.0040	-1.59	1.05	-1.52
PFKFB3	0.0012	1.14	1.41	1.61	*DLGAP1*	0.0054	1.54	-1.14	1.35	*GINS1*	0.0088	-1.52	1.02	-1.49
SETBP1	0.0071	1.32	1.3	1.72	*LINC00944*	0.0057	1.74	-1.22	1.42	*ADRBK1*	0.0017	-1.51	1.01	-1.5
ST6GAL1	0.0003	-1.2	1.65	1.37	*MYCBP*	0.0016	-1.5	1.31	-1.14	*CCNB1*	0.0064	-1.5	1	-1.49

Genes	P-value	Fold Change			Genes	P-value	Fold Change			Genes	P-value	Fold Change		
		28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz
KIF11	0.0003	-1.86	1.14	-1.64	*ADRBK2*	0.0004	-1.19	-1.31	-1.55	*RASGEF1B*	0.0067	1.27	-1.93	-1.52
PRC1	0.0003	-1.55	1.02	-1.53	*CD9*	0.0059	-1.8	-1.02	-1.85	*ANKRD30B*	0.0084	-1.73	-1.27	-2.19
SQLE	0.0004	-1.56	1.02	-1.53	*SMOX*	0.0001	1.84	-1.86	-1.01	*PIP5K1B*	0.0075	-1.86	-1.23	-2.29
RAPH1	0.0006	1.85	-1.66	1.12	*ABHD2*	0.0033	1.08	-1.5	-1.38	*BTLA*	0.0001	1.06	-1.85	-1.73
UBE2T	0.0000	-1.9	1.13	-1.68	*FGFR1*	0.0002	-1.29	-1.26	-1.62	*CD200*	0.0008	1.03	-1.86	-1.82
ATAD2	0.0002	-1.71	1.06	-1.62	*IKZF2*	0.0046	1.09	-1.5	-1.38	*CD72*	0.0016	1.24	-2.04	-1.65
INSL6	0.0028	1.63	-1.59	1.02	*SERPINE2*	0.0015	1.15	-1.54	-1.34	*MTSS1*	0.0006	-1.88	-1.28	-2.41
FANCI	0.0003	-1.74	1.06	-1.64	*SLAMF6*	0.0080	1.14	-1.53	-1.35	*TREML5P*	0.0016	-1.22	-1.67	-2.04
MKI67	0.0052	-1.71	1.05	-1.63	*TRAV8-4*	0.0053	-1.18	-1.32	-1.56	*NR4A2*	0.0000	-1.03	-1.84	-1.88
USP17L9P	0.0044	1.76	-1.66	1.06	*FAM213A*	0.0030	-1.24	-1.29	-1.6	*INSM1*	0.0018	-1.1	-1.79	-1.97
DLGAP5	0.0000	-1.72	1.04	-1.65	*LOC105376878*	0.0001	-1.13	-1.36	-1.53	*FGL2*	0.0007	1.09	-1.97	-1.8
TICRR	0.0002	-1.84	1.07	-1.71	*ZG16B*	0.0024	-1.46	-1.18	-1.72	*ID3*	0.0010	-1.35	-1.61	-2.18
CCNA2	0.0000	-2.06	1.15	-1.79	*INPP5F*	0.0011	-1.62	-1.11	-1.79	*PHEX*	0.0009	-1.76	-1.47	-2.59
TOP2A	0.0003	-1.7	1.01	-1.69	*GREB1*	0.0094	-1.23	-1.3	-1.6	*VCAM1*	0.0068	-2.31	-1.24	-2.86
YPEL3	0.0018	-1.81	1.03	-1.75	*TSPAN2*	0.0040	-1.78	-1.05	-1.86	*ARMC9*	0.0001	-1.54	-1.63	-2.5
FAM111B	0.0003	-2.11	1.13	-1.87	*CD5*	0.0011	-1.42	-1.21	-1.71	*FAM72A*	0.0021	1.19	-2.25	-1.89
COL6A2	0.0003	-2.27	1.17	-1.94	*FLNB*	0.0031	-1.15	-1.36	-1.56	*ARHGAP42*	0.0020	1.27	-2.34	-1.83
CCNB2	0.0068	-1.83	1.02	-1.8	*HHLA3*	0.0090	-1.05	-1.43	-1.5	*IGLC7*	0.0089	-2.23	-1.29	-2.89
HLA-DQA2	0.0034	-2.82	1.33	-2.12	*ARHGAP31*	0.0002	-1.56	-1.15	-1.79	*NCEH1*	0.0006	1.1	-2.24	-2.04
EIF1AX	0.0060	1.84	-1.82	1.01	*DUSP18*	0.0009	1.58	-1.8	-1.14	*COL6A1*	0.0001	-2.43	-1.28	-3.1
TNFSF4	0.0013	-2.76	1.27	-2.17	*MYO1E*	0.0082	-1.13	-1.38	-1.56	*KIAA1324*	0.0011	-2.81	-1.18	-3.32
NCAPG	0.0002	-2.08	1.05	-1.99	*DGKA*	0.0026	-1.46	-1.2	-1.75	*CCL1*	0.0009	-1.27	-2.05	-2.6
CCR8	0.0033	-3.43	1.03	-3.33	*UPRT*	0.0058	-1.06	-1.44	-1.52	*DHRS3*	0.0000	-1.54	-1.93	-2.96
CDK1	0.0047	-1.49	-1.01	-1.5	*KIT*	0.0036	-1.83	-1.05	-1.92	*NHS*	0.0000	-1.88	-1.91	-3.59
NCAPD3	0.0011	-1.54	-1.01	-1.55	*RSPH4A*	0.0023	-1.04	-1.46	-1.51	*CD160*	0.0000	1.51	-3.33	-2.21
NEK2	0.0035	-1.52	-1.02	-1.55	*SGK223*	0.0010	1.25	-1.65	-1.32	*SERPINE1*	0.0001	-1.54	-2.2	-3.38
THYN1	0.0080	-1.42	-1.06	-1.51	*SNORD113-9*	0.0076	-1.43	-1.22	-1.75	*ISM1*	0.0000	1.13	-3.08	-2.72
MCM10	0.0041	-1.55	-1.01	-1.57	*EVI2A*	0.0027	1.98	-1.99	-1.01	*CCL22*	0.0001	-2.96	-3.42	-10.13
LOC105378541	0.0054	1.45	-1.53	-1.05	*GJB2*	0.0026	-1.18	-1.38	-1.63					
IL23A	0.0011	1.49	-1.57	-1.05	*HSD17B11*	0.0063	-1.01	-1.5	-1.52					
ASPM	0.0010	-1.5	-1.05	-1.58	*CCND1*	0.0049	1.16	-1.62	-1.4					
PDCD4	0.0031	-1.41	-1.09	-1.54	*DOCK5*	0.0005	-1.42	-1.25	-1.77					
FLJ44385	0.0001	1.31	-1.5	-1.14	*MYADM*	0.0002	-1.25	-1.34	-1.68					
CCP110	0.0008	-1.3	-1.15	-1.5	*LOC105379311*	0.0086	1.41	-1.77	-1.26					
HSPB1	0.0049	-1.56	-1.04	-1.61	*RILPL2*	0.0004	1.15	-1.62	-1.41					
LEF1	0.0089	-1.42	-1.1	-1.56	*TLE4*	0.0036	-1.02	-1.5	-1.54					
CAMK2D	0.0006	1.34	-1.54	-1.14	*CD84*	0.0013	1.22	-1.67	-1.37					
P2RY1	0.0049	-1.27	-1.18	-1.51	*CENPH*	0.0054	-1.3	-1.32	-1.72					
SPTBN1	0.0055	-1.35	-1.14	-1.55	*EXO1*	0.0008	-1.54	-1.2	-1.85					
CCDC141	0.0021	-1.49	-1.08	-1.61	*LOC101927482*	0.0091	1.52	-1.84	-1.21					
DRAM2	0.0015	-1.31	-1.17	-1.53	*NELL2*	0.0000	-1.23	-1.37	-1.68					
RRM1	0.0001	-1.62	-1.03	-1.68	*ENOX1*	0.0081	-1.61	-1.17	-1.89					
E2F8	0.0044	-1.3	-1.18	-1.53	*KIF23*	0.0000	-1.94	-1.04	-2.03					
ASB2	0.0071	-1.43	-1.12	-1.6	*SPRY1*	0.0009	1.13	-1.63	-1.44					
BNIP3L	0.0001	-1.42	-1.12	-1.6	*TMEM14C*	0.0079	-1.05	-1.5	-1.57					
HMGB2	0.0000	-1.57	-1.06	-1.67	*XCL2*	0.0003	1.03	-1.56	-1.51					
PRR11	0.0007	-1.56	-1.07	-1.66	*PIKFYVE*	0.0017	-1.18	-1.41	-1.67					
C12orf57	0.0070	-1.4	-1.14	-1.59	*PTPN3*	0.0025	-1.13	-1.45	-1.65					
CHST1	0.0094	1.28	-1.53	-1.2	*TESK1*	0.0003	1.1	-1.63	-1.48					
TBC1D2	0.0008	-1.25	-1.22	-1.51	*HVCN1*	0.0011	-1.74	-1.14	-1.98					
AFF3	0.0070	-1.45	-1.12	-1.62	*RALGAPA2*	0.0006	1.01	-1.58	-1.56					
CXorf21	0.0007	-1.45	-1.12	-1.62	*FCMR*	0.0015	1.24	-1.75	-1.41					
FAT1	0.0037	-1.28	-1.21	-1.54	*SLC35E4*	0.0016	1.31	-1.79	-1.37					
LCK	0.0020	-1.23	-1.23	-1.52	*LAYN*	0.0040	-1.74	-1.16	-2.01					
MIR3646	0.0007	-1.48	-1.11	-1.64	*IL3*	0.0002	1.19	-1.72	-1.45					
TRAF5	0.0040	1.2	-1.5	-1.25	*SESTD1*	0.0081	-1.17	-1.46	-1.71					
CENPF	0.0006	-1.54	-1.09	-1.67	*LOC100507600*	0.0061	-1.5	-1.27	-1.91					
HMMR	0.0000	-1.66	-1.04	-1.72	*TCF7*	0.0002	-1.44	-1.3	-1.88					
POLR3C	0.0002	1.19	-1.5	-1.26	*GPR155*	0.0019	1.32	-1.83	-1.38					
MELK	0.0083	-1.46	-1.13	-1.65	*NLRP6*	0.0024	1.06	-1.68	-1.58					
SMC2	0.0029	-1.53	-1.1	-1.68	*FGF2*	0.0068	-1.21	-1.48	-1.79					
CENPV	0.0051	-1.21	-1.26	-1.52	*PLXNC1*	0.0010	1.07	-1.72	-1.6					
SUOX	0.0023	-1.6	-1.07	-1.72	*ZCWPW2*	0.0025	-1.93	-1.15	-2.21					
TYMS	0.0012	-1.61	-1.07	-1.72	*FAM102A*	0.0012	-1.21	-1.52	-1.84					
NT5E	0.0045	1.56	-1.72	-1.1	*MGAT5*	0.0007	1.18	-1.82	-1.54					
GPATCH11	0.0004	-1.33	-1.21	-1.61	*CD27*	0.0000	-1.07	-1.63	-1.76					
ARMCX6	0.0064	-1.14	-1.32	-1.51	*PRCP*	0.0000	-1.05	-1.67	-1.75					
CDKN3	0.0083	-1.23	-1.27	-1.57	*JAG1*	0.0016	-1.48	-1.38	-2.05					

24 hours after NALM-6 stimulaiton (429 genes)

Genes	P-value	Fold Change			Genes	P-value	Fold Change			Genes	P-value	Fold Change		
		28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz
IL10	0.0015	1.18	5.77	6.83	*MIR580*	0.0076	-1.08	1.89	1.75	*LOC729088*	0.0004	1.54	1.14	1.76
IL1R1	0.0012	1.48	1.59	2.36	*CD274*	0.0005	1.44	1.49	2.14	*PCCA*	0.0002	-1.08	1.51	1.39
KLRC1	0.0014	-1.04	2	1.92	*SLC2A3*	0.0014	-1.09	1.88	1.73	*MTM1*	0.0014	-1.51	1.74	1.15
F2R	0.0002	-1.1	2.03	1.85	*LOC105376145*	0.0028	1.1	1.72	1.89	*SETBP1*	0.0002	1.53	1.14	1.74
GZMB	0.0042	1.4	1.43	1.99	*PALLD*	0.0036	-1.06	1.81	1.71	*CASP8*	0.0046	-1.17	1.55	1.32
PRDM1	0.0009	1.41	1.31	1.85	*AIM2*	0.0006	-1.09	1.83	1.68	*FCMR*	0.0078	1.24	1.28	1.59
CCR5	0.0094	-1.27	1.76	1.38	*TNIP3*	0.0008	-1.07	1.82	1.69	*PWARSN*	0.0056	1.26	1.27	1.59
IL1R2	0.0005	1.27	1.35	1.71	*LOC389765*	0.0055	1.51	1.39	2.09	*CLK1*	0.0061	-1.19	1.55	1.3
KSR1	0.0009	-1.12	1.57	1.4	*ABCA2*	0.0004	1.07	1.68	1.79	*RASGRF2*	0.0089	1.13	1.34	1.51
GZMA	0.0033	-1.52	1.76	1.16	*RGS9*	0.0002	-1.18	1.87	1.59	*PGAM1*	0.0005	1.38	1.2	1.65
NKG7	0.0036	1.51	1.13	1.7	*ANKRD20A5P*	0.0052	1.53	1.36	2.08	*LAG3*	0.0027	1.78	1.02	1.81
GCNT1	0.0017	1.25	1.21	1.5	*TMED10P1*	0.0049	1.06	1.67	1.77	*GLUD1*	0.0037	1.14	1.32	1.51
BMPR1A	0.0032	1.51	1.02	1.54	*MIR3685*	0.0016	1.52	1.36	2.07	*PBXIP1*	0.0076	-1.39	1.64	1.18
IL21	0.0038	-1.12	2.87	2.56	*XRRA1*	0.0005	1.06	1.65	1.75	*CIITA*	0.0066	-1.3	1.59	1.22
ABLIM1	0.0098	-1.02	2.2	2.15	*ACVR1*	0.0003	1.17	1.56	1.83	*LOC220729*	0.0088	-1.14	1.5	1.31
GALNT10	0.0017	-1.02	2.09	2.04	*TC2N*	0.0020	-1.68	2.11	1.26	*CST7*	0.0009	1.45	1.15	1.66
CTLA4	0.0002	1.02	1.98	2.02	*ARRDC3*	0.0000	-1.25	1.86	1.49	*TMEM14EP*	0.0073	-1.34	1.61	1.19
SBNO2	0.0015	1.02	1.79	1.82	*MIR3945*	0.0052	1.25	1.49	1.86	*MAP3K5*	0.0000	-1.35	1.6	1.19
CD28	0.0060	-1.22	1.96	1.61	*TANC2*	0.0017	1.2	1.51	1.82	*TMEM71*	0.0043	-1.46	1.66	1.13
SPEF2	0.0007	1.18	1.6	1.88	*LINC-PINT*	0.0025	1.28	1.46	1.86	*NIPAL4*	0.0039	1.41	1.15	1.63
MFAP3	0.0025	-1.11	1.79	1.61	*BCAT1*	0.0043	1.04	1.62	1.69	*SERPINI1*	0.0037	-1.45	1.64	1.13
SOX5	0.0003	1.02	1.64	1.68	*RTKN2*	0.0000	-1.28	1.85	1.44	*LGALS3*	0.0078	1.28	1.21	1.55
NFIA	0.0004	1.14	1.5	1.72	*RNF213*	0.0005	-1.48	1.95	1.32	*LOC105376177*	0.0005	1.31	1.19	1.56
ITGA3	0.0056	-1	1.52	1.52	*PGAP1*	0.0005	1.06	1.58	1.67	*CCL4L1*	0.0071	1.68	1.02	1.71
RFX3	0.0042	-1.41	1.54	1.09	*LOC101060038*	0.0072	-1.37	1.88	1.37	*ZNF101*	0.0006	-1.24	1.51	1.22
BCL3	0.0002	-1.18	2.09	1.77	*KLRAP1*	0.0004	1.02	1.59	1.62	*SNORD127*	0.0038	1.26	1.21	1.52
BATF	0.0003	-1.03	1.75	1.7	*SNORD11B*	0.0033	1.25	1.42	1.78	*VAMP4*	0.0024	-1.28	1.52	1.19
SOCS3	0.0030	1.34	1.43	1.92	*CD226*	0.0007	1.4	1.32	1.86	*MYO6*	0.0040	1.46	1.1	1.61
FOSL2	0.0002	1.25	1.34	1.67	*TMEM65*	0.0004	1.03	1.56	1.61	*SLC7A5P2*	0.0088	1.49	1.09	1.62
MCTP2	0.0003	-1.11	1.57	1.41	*SIK3-IT1*	0.0002	1.42	1.31	1.86	*FKBP14*	0.0079	1.27	1.18	1.51
GPR18	0.0025	-1.58	1.66	1.05	*MIR573*	0.0034	-1.16	1.7	1.47	*CLU*	0.0045	-1.37	1.55	1.13
OSTF1	0.0001	-1.38	1.51	1.09	*IL1RAP*	0.0099	1.14	1.48	1.69	*C10orf128*	0.0069	1.45	1.08	1.56
TNFRSF8	0.0011	1.34	5.99	8.05	*ZC3H12D*	0.0061	-1.06	1.62	1.53	*SLC25A4*	0.0082	1.63	1	1.64
LOC105373955	0.0022	2	3.58	7.16	*NUGGC*	0.0052	1.13	1.48	1.67	*ZNF449*	0.0008	-1.34	1.5	1.12
IL26	0.0009	-1	4.42	4.41	*IGANRP*	0.0016	-1.07	1.61	1.51	*ARHGEF35*	0.0017	1.51	1.04	1.57
EPAS1	0.0045	2	2.87	5.74	*SERPINB1*	0.0037	-1.05	1.6	1.52	*LOC105370905*	0.0005	-1.46	1.54	1.05
COL6A3	0.0049	1.08	3.41	3.69	*LOC154761*	0.0052	1.11	1.48	1.64	*ADAMTS6*	0.0006	1.44	1.04	1.5
RCAN2	0.0004	1.02	3.02	3.09	*CCR1*	0.0004	-1.55	1.89	1.22	*ADCY3*	0.0079	1.44	1.04	1.5
LOC101928173	0.0011	1.7	2.17	3.69	*ADD3*	0.0057	-1.46	1.84	1.26	*F5*	0.0000	2.75	-1.22	2.25
TRERF1	0.0000	-1.39	3.29	2.36	*HLA-DRA*	0.0052	-1.64	1.92	1.18	*EMP1*	0.0086	2.37	-1.13	2.09
SLCO4C1	0.0084	-1.15	3.01	2.61	*TXK*	0.0074	-1.23	1.7	1.38	*TP53INP1*	0.0045	-1.92	1.84	-1.04
IL7R	0.0023	-1.66	3.24	1.95	*NARF*	0.0016	1.01	1.53	1.54	*MYOF*	0.0007	1.93	-1.1	1.76
GLUL	0.0043	1.13	2.39	2.71	*FAM184A*	0.0018	1.03	1.51	1.56	*BNIP3*	0.0096	1.53	-1.01	1.51
ZNRF1	0.0003	1.09	2.42	2.64	*RRAGC*	0.0005	1.19	1.4	1.67	*ALOX5AP*	0.0001	-1.69	1.55	-1.09
ZBED2	0.0057	1.12	2.33	2.6	*RPRD1A*	0.0005	-1.13	1.63	1.44	*LOC729461*	0.0013	-1.58	1.5	-1.05
ANKRD20A1	0.0026	1.17	2.12	2.48	*PARP9*	0.0001	-1.3	1.73	1.33	*HERC6*	0.0031	-1.73	1.53	-1.13
SULT1B1	0.0022	-1.14	2.37	2.08	*KLRD1*	0.0078	1.05	1.49	1.56	*GZMK*	0.0051	-2.74	1.86	-1.47
DDIT4	0.0025	-1.14	2.27	1.99	*ATP2B4*	0.0008	-1.73	1.92	1.11	*SIRPB1*	0.0023	-1.73	1.51	-1.15
SATB1	0.0001	-1.15	2.24	1.95	*CRYZ*	0.0002	-1.14	1.61	1.42	*PAM*	0.0000	1.91	-1.22	1.56
STRIP2	0.0004	1.34	1.79	2.4	*SNORD99*	0.0011	1.88	1.05	1.97	*GPSM2*	0.0032	-1.69	1.44	-1.18
SH3BP5	0.0009	-1.2	2.27	1.9	*HNRNPU*	0.0055	1.01	1.5	1.51	*RHOU*	0.0055	-1.5	1.36	-1.1
FAM46C	0.0003	-1.28	2.34	1.82	*LINC00484*	0.0035	1.36	1.28	1.73	*SAMD9L*	0.0011	-1.82	1.48	-1.23
GIMAP7	0.0001	-2.15	2.82	1.31	*GAB3*	0.0000	-1.24	1.66	1.34	*ENPP4*	0.0090	1.5	-1.11	1.34
GPR160	0.0008	1.24	1.83	2.27	*SPATS2L*	0.0011	-1.03	1.52	1.47	*ERP27*	0.0009	-1.77	1.44	-1.23
GIMAP4	0.0005	-2.04	2.67	1.31	*TRIB2*	0.0074	-1.66	1.86	1.12	*VDR*	0.0012	1.55	-1.15	1.35
PRKAR2B	0.0033	1.24	1.76	2.19	*LOC100996286*	0.0008	-1.9	1.95	1.03	*EVI2B*	0.0009	-1.85	1.46	-1.27
FURIN	0.0010	-1.26	2.17	1.73	*TCAF2*	0.0030	-1.02	1.5	1.48	*MVB12B*	0.0007	-1.54	1.33	-1.16
STOM	0.0004	-1.18	2.11	1.78	*ARID3B*	0.0056	1.27	1.31	1.66	*CNN2*	0.0044	-1.51	1.31	-1.16
KDSR	0.0017	1.24	1.73	2.15	*PLGLA*	0.0088	1.21	1.34	1.61	*TJP2*	0.0004	1.86	-1.29	1.44
SLC27A2	0.0003	1.03	1.91	1.96	*SLC9A9*	0.0000	-1.72	1.86	1.08	*G0S2*	0.0033	1.9	-1.32	1.45
GPR183	0.0060	-1.05	1.97	1.87	*RNF157*	0.0004	1.16	1.36	1.58	*SNORD35B*	0.0041	1.72	-1.25	1.38
MAF	0.0014	1.87	1.33	2.48	*GALNT3*	0.0002	1.11	1.39	1.55	*DKFZP586I1420*	0.0036	-1.68	1.35	-1.24
LUCAT1	0.0003	-1.24	2.1	1.68	*CYP4F35P*	0.0090	1.07	1.42	1.52	*DYNC2LI1*	0.0007	1.64	-1.23	1.33
PIM2	0.0003	1.56	1.44	2.23	*SLC39A10*	0.0002	-1.22	1.6	1.32	*SLFN5*	0.0042	-2.07	1.49	-1.39
FNIP2	0.0007	1.23	1.64	2.02	*LOC101927841*	0.0043	1.46	1.19	1.73	*SAMD9*	0.0044	-1.54	1.29	-1.2
GZMH	0.0000	1.62	1.4	2.26	*GPR87*	0.0014	1.6	1.12	1.78	*LOC105370435*	0.0066	-1.59	1.3	-1.22

Genes	P-value	Fold Change			Genes	P-value	Fold Change			Genes	P-value	Fold Change		
		28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz
CTH	0.005035	1.55	-1.23	1.26	*CYLD*	0.0029	-1.24	-1.24	-1.54	*ETS2*	0.0016	-1.3	-1.38	-1.8
CINP	0.009847	1.66	-1.29	1.29	*KIAA0922*	0.0032	-1.19	-1.27	-1.51	*TNFSF14*	0.0000	1.52	-1.93	-1.26
FAM65B	0.004033	-1.66	1.28	-1.29	*OR51A2*	0.0035	-1.19	-1.27	-1.51	*FAM69A*	0.0000	1.22	-1.76	-1.44
SMAD3	0.001404	-1.54	1.23	-1.25	*NFIX*	0.0072	1.18	-1.51	-1.28	*FOXP1*	0.0081	1.21	-1.75	-1.45
NCKAP1	0.003843	1.8	-1.36	1.33	*TNFAIP3*	0.0001	1.58	-1.72	-1.08	*FUT8*	0.0055	1.01	-1.61	-1.6
KIF14	0.002568	-1.52	1.21	-1.26	*PDE7A*	0.0023	-1.33	-1.2	-1.6	*SERTAD2*	0.0003	-1.19	-1.47	-1.74
SNORA71A	0.006903	1.57	-1.29	1.22	*UBASH3B*	0.0001	1.38	-1.63	-1.18	*LOC105377447*	0.0005	1.04	-1.64	-1.58
GVINP1	0.004866	-1.5	1.18	-1.28	*SNTB1*	0.0008	-1.2	-1.28	-1.53	*NFE2L3*	0.0010	1.35	-1.86	-1.37
GNPDA1	0.000047	2.03	-1.48	1.37	*CLIC4*	0.0070	1.27	-1.57	-1.24	*INPP5F*	0.0069	-1.15	-1.51	-1.73
APOBEC3H	0.004123	-1.56	1.19	-1.31	*LOC105373187*	0.0091	-1.56	-1.1	-1.72	*PDCD4*	0.0048	-1.16	-1.5	-1.75
CCNG2	0.002079	-1.57	1.19	-1.32	*UNQ6494*	0.0071	-1.22	-1.27	-1.55	*ARHGAP31*	0.0039	1.09	-1.7	-1.56
LRMP	0.007492	-1.62	1.2	-1.35	*HIVEP3*	0.0045	1.38	-1.64	-1.19	*P2RY14*	0.0040	-1.78	-1.18	-2.11
CCR2	0.000834	-2.26	1.42	-1.59	*RAB9A*	0.0003	-1.14	-1.33	-1.51	*CRIM1*	0.0090	2.1	-2.25	-1.07
IQCF3	0.002961	1.68	-1.41	1.19	*LAX1*	0.0040	1.24	-1.57	-1.27	*ATXN1*	0.0035	-1.02	-1.66	-1.69
NFATC1	0.009257	1.51	-1.35	1.12	*CD72*	0.0062	1.58	-1.75	-1.11	*SYPL1*	0.0003	-1.29	-1.46	-1.89
TRGJP1	0.0089	-1.62	1.15	-1.4	*LOC105379695*	0.0087	1.62	-1.77	-1.09	*AMICA1*	0.0001	1.33	-1.92	-1.45
KCCAT198	0.0074	-2.35	1.41	-1.67	*LITAF*	0.0000	1.28	-1.61	-1.25	*NEK6*	0.0005	1.05	-1.73	-1.65
GLIPR1	0.0020	-1.56	1.09	-1.42	*IL10RA*	0.0012	-1.16	-1.32	-1.54	*TLR5*	0.0011	-1.93	-1.16	-2.24
RGCC	0.0020	1.54	-1.42	1.08	*XIRP1*	0.0099	1.81	-1.85	-1.02	*TNFSF11*	0.0021	1.01	-1.71	-1.7
LOC101929929	0.0037	1.53	-1.42	1.08	*SNX11*	0.0005	1.11	-1.51	-1.36	*MAL*	0.0051	1.06	-1.75	-1.66
MCOLN2	0.0049	1.52	-1.44	1.06	*KIAA1147*	0.0057	1.19	-1.56	-1.32	*PSTPIP2*	0.0001	1.99	-2.28	-1.14
MYBL1	0.0094	-1.55	1.05	-1.48	*MIR1249*	0.0059	-1.45	-1.18	-1.71	*IKZF2*	0.0007	-1.6	-1.32	-2.1
TNFSF13B	0.0062	-1.5	1.02	-1.46	*DNAJC5B*	0.0061	-1.81	-1.03	-1.86	*COL6A1*	0.0012	-1.27	-1.51	-1.93
SIRPG	0.0006	-1.86	1.16	-1.6	*ARHGEF3*	0.0022	-1.11	-1.37	-1.52	*SNX9*	0.0003	1.3	-1.95	-1.5
RHOB	0.0000	1.71	-1.55	1.1	*OAS3*	0.0081	-1.3	-1.26	-1.64	*ISM1*	0.0044	1.35	-1.99	-1.48
MIR155HG	0.0015	1.72	-1.57	1.09	*KRT7*	0.0079	-1.32	-1.25	-1.66	*NCF2*	0.0011	1.04	-1.77	-1.71
GPR15	0.0005	-1.86	1.12	-1.66	*RAB30*	0.0093	1.12	-1.55	-1.38	*SGPP2*	0.0076	1.03	-1.77	-1.71
C12orf75	0.0007	-1.54	1	-1.54	*PTPN3*	0.0017	-1.77	-1.06	-1.88	*RDH10*	0.0035	-1.02	-1.75	-1.79
DUSP2	0.0004	1.92	-1.72	1.12	*LOC105375440*	0.0042	1.13	-1.56	-1.38	*RAB8B*	0.0003	1.02	-1.81	-1.77
CCL3L3	0.0072	2.17	-1.81	1.2	*ADO*	0.0069	1.07	-1.52	-1.42	*SH2B3*	0.0002	1.41	-2.1	-1.49
CHRNA6	0.0007	-1.79	1.06	-1.69	*TIGIT*	0.0035	1.19	-1.6	-1.34	*CXorf21*	0.0016	-1.42	-1.49	-2.1
MFSD2A	0.0011	1.75	-1.69	1.04	*STAP1*	0.0024	-1.76	-1.07	-1.88	*P2RY10*	0.0000	-1.32	-1.56	-2.06
XAF1	0.0007	-2.01	1.11	-1.81	*STAT5A*	0.0001	1.2	-1.61	-1.34	*MPZL3*	0.0007	1.19	-1.97	-1.65
IGKV3D-15	0.0011	-1.77	1.02	-1.74	*RILPL2*	0.0000	1.35	-1.7	-1.26	*CD38*	0.0049	-1.25	-1.62	-2.02
GSTA4	0.0022	1.74	-1.74	1	*LOC105370498*	0.0099	1.23	-1.63	-1.33	*FSCN1*	0.0002	-1.24	-1.63	-2.03
CCDC141	0.0009	-1.91	1.05	-1.83	*LOC105373315*	0.0030	1.08	-1.54	-1.43	*TIAM2*	0.0000	1.48	-2.19	-1.48
IRF8	0.0008	3.02	-2.58	1.17	*PHLDA1*	0.0071	-1.03	-1.46	-1.51	*CD70*	0.0001	1.29	-2.07	-1.61
IFNG	0.0021	2.9	-2.89	1.01	*NELL2*	0.0000	-1.38	-1.25	-1.73	*ACTN1*	0.0021	1.06	-1.89	-1.79
MDFIC	0.0014	1.45	-1.52	-1.05	*EBI3*	0.0005	1.48	-1.78	-1.2	*SESN3*	0.0009	-1.03	-1.82	-1.88
LOC100129973	0.0020	-1.46	-1.05	-1.53	*FAM105A*	0.0010	-1.69	-1.11	-1.87	*CD83*	0.0025	1.59	-2.27	-1.43
B3GNT5	0.0042	1.42	-1.53	-1.08	*EGR2*	0.0012	1.37	-1.73	-1.26	*BCL2L1*	0.0001	1.4	-2.17	-1.55
ARHGEF2	0.0049	1.33	-1.5	-1.13	*NINJ1*	0.0014	1.24	-1.66	-1.34	*TRAF1*	0.0000	1.29	-2.1	-1.63
LOC105371864	0.0001	1.34	-1.51	-1.13	*NRIP1*	0.0025	-1.18	-1.38	-1.62	*DENND5A*	0.0013	1.1	-1.95	-1.78
IL9R	0.0000	-1.52	-1.05	-1.59	*PPFIBP1*	0.0000	-1.57	-1.17	-1.84	*PRRT3*	0.0003	1.02	-1.91	-1.88
ADAP1	0.0014	1.38	-1.53	-1.11	*LINC00158*	0.0059	1.94	-1.99	-1.02	*MIR146A*	0.0002	1.12	-2.01	-1.79
PIKFYVE	0.0058	-1.38	-1.11	-1.53	*GPR174*	0.0026	-1.24	-1.35	-1.67	*LOC100129034*	0.0036	1.04	-1.94	-1.86
EED	0.0018	1.62	-1.65	-1.01	*LRIG1*	0.0002	-1.03	-1.5	-1.54	*PELO*	0.0046	-1.4	-1.59	-2.22
RAB11FIP1	0.0069	1.33	-1.52	-1.14	*IGFLR1*	0.0000	1.18	-1.64	-1.4	*ZNF704*	0.0005	1.75	-2.5	-1.43
ACSL6	0.0001	1.66	-1.67	-1	*FGFR1*	0.0001	-1.41	-1.26	-1.78	*AICDA*	0.0045	1.08	-2.05	-1.9
DOK2	0.0004	1.32	-1.52	-1.15	*NFKB2*	0.0004	1.2	-1.66	-1.38	*CCL4L2*	0.0014	2.67	-2.9	-1.09
ADRBK2	0.0022	-1.41	-1.11	-1.56	*CYSLTR1*	0.0046	-1.6	-1.17	-1.88	*RGS16*	0.0028	1.47	-2.37	-1.62
IQCF2	0.0027	-1.36	-1.13	-1.54	*STARD4*	0.0034	1.09	-1.59	-1.46	*CCR8*	0.0008	-1.54	-1.57	-2.43
EPB41L4B	0.0037	-1.3	-1.16	-1.51	*ADGRE5*	0.0004	1.04	-1.56	-1.5	*MIR200C*	0.0052	-1.28	-1.78	-2.27
TP53I11	0.0046	-1.37	-1.13	-1.54	*AGK*	0.0001	1.18	-1.66	-1.41	*CRTAM*	0.0004	1.31	-2.33	-1.78
C16orf45	0.0071	1.63	-1.66	-1.02	*NFKBIA*	0.0004	1.41	-1.8	-1.27	*CD160*	0.0007	2.83	-3.04	-1.08
GCNT2	0.0039	-1.33	-1.15	-1.53	*CAV1*	0.0001	-1.09	-1.47	-1.61	*LAYN*	0.0001	-1.23	-1.86	-2.29
BMF	0.0003	1.34	-1.55	-1.15	*GUCY1B3*	0.0014	-1.37	-1.3	-1.78	*BACH2*	0.0001	1.39	-2.43	-1.75
SIAH2	0.0003	1.33	-1.54	-1.16	*PLPP1*	0.0001	1.02	-1.56	-1.53	*PTGIR*	0.0020	1.29	-2.36	-1.82
ZBTB32	0.0046	1.69	-1.71	-1.01	*TNF*	0.0056	1.67	-1.94	-1.16	*TAGAP*	0.0000	1.95	-2.78	-1.43
CD52	0.0021	-1.26	-1.2	-1.52	*ZG16B*	0.0010	-1.37	-1.31	-1.79	*TBC1D4*	0.0001	2.12	-2.89	-1.37
LINC00853	0.0039	1.26	-1.52	-1.21	*TRGV10*	0.0007	-1.58	-1.21	-1.9	*SPRY1*	0.0033	1.59	-2.66	-1.67
LOC440867	0.0083	-1.35	-1.16	-1.57	*SERPINE2*	0.0058	1.57	-1.9	-1.21	*MYO1E*	0.0009	1.45	-2.58	-1.78
TTN	0.0047	-1.5	-1.1	-1.65	*TRIP10*	0.0001	1.41	-1.82	-1.29	*REL*	0.0032	1.42	-2.64	-1.86
COL6A2	0.0053	-1.29	-1.2	-1.55	*AHI1*	0.0063	-1.31	-1.35	-1.77	*CD80*	0.0091	2.19	-3.09	-1.41
VIM	0.0013	-1.51	-1.1	-1.66	*SGK223*	0.0008	1.34	-1.79	-1.34	*PHEX*	0.0015	3.33	-3.53	-1.06
GBP4	0.0022	-1.74	-1.01	-1.75	*CD109*	0.0001	1.62	-1.95	-1.2	*LOC105370177*	0.0006	1.41	-2.73	-1.94
IFNAR2	0.0001	-1.45	-1.13	-1.64	*HVCN1*	0.0006	1.35	-1.82	-1.34	*NHS*	0.0001	-1.19	-2.16	-2.56
TSPAN13	0.0081	1.41	-1.62	-1.15	*SHC4*	0.0019	1.81	-2.04	-1.13	*CCL4*	0.0008	2.69	-3.49	-1.29

Genes	P-value	Fold Change		
		28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz
KIAA1324	0.0004	-1.03	-2.38	-2.45
VCAM1	0.0058	-2.42	-1.41	-3.42
ABTB2	0.0017	1.53	-2.98	-1.94
IL23A	0.0012	2.34	-3.45	-1.48
XCL1	0.0031	1.38	-2.88	-2.09
DHRS3	0.0000	1.51	-3.01	-1.99
PDE7B	0.0001	-1.88	-1.74	-3.27
IGF1	0.0010	1.64	-3.18	-1.94
IL13	0.0034	1.11	-2.71	-2.43
TNFRSF9	0.0012	2.14	-3.59	-1.68
SDC4	0.0002	1.93	-3.53	-1.83
IL1A	0.0012	2.39	-3.8	-1.59
NR4A2	0.0004	2.14	-3.76	-1.75
DUSP10	0.0001	1.02	-3.02	-2.94
IER3	0.0001	1.69	-3.78	-2.23
NR4A3	0.0007	2.47	-4.58	-1.85
HNF1B	0.0003	-1.08	-3.25	-3.51
AFAP1L2	0.0005	-1.34	-2.96	-3.96
CD82	0.0011	1.48	-4.2	-2.83
CD200	0.0000	3.93	-5.88	-1.49
TNFSF4	0.0009	-1.04	-4.85	-5.03
XCL2	0.0000	2.69	-10.5	-3.9
CSF2	0.0001	3.35	-13.94	-4.16
CCL22	0.0000	2.04	-12.63	-6.18
IL2	0.0003	13.36	-18.01	-1.35
CCL1	0.0001	2.14	-34.25	-15.97
IL3	0.0001	13.75	-47.44	-3.45

72 hours after NALM-6 stimulaiton 1351 genes)														
		Fold Change					Fold Change					Fold Change		
Genes	P-value	28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz	Genes	P-value	28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz	Genes	P-value	28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz
IL18RAP	0.0001	2.7	1.79	4.82	*LINC01358*	0.0027	-1.86	5.15	2.78	*HIST1H4B*	0.0023	1.1	1.97	2.18
GZMB	0.0004	1.9	1.92	3.66	*ITGA6*	0.0000	1.49	3.09	4.61	*LOC154761*	0.0001	-1.25	2.3	1.83
IL10	0.0095	-1.02	2.6	2.56	*CATSPERB*	0.0012	-1.7	4.53	2.66	*HYKK*	0.0054	-1.15	2.19	1.91
NEAT1	0.0001	-1.11	2.51	2.28	*FGFBP2*	0.0000	-2.47	4.98	2.01	*LOC102724275*	0.0001	-1.33	2.34	1.76
IL12A	0.0005	-1.67	2.91	1.74	*VSIG1*	0.0001	-3.14	5.16	1.64	*NUCB2*	0.0001	-1.46	2.44	1.66
MXD1	0.0004	-1.09	2.14	1.96	*LOC101929355*	0.0068	-1.07	3.3	3.09	*KLRC3*	0.0000	-2.47	2.91	1.18
GAS2L3	0.0009	1.05	1.99	2.09	*GIMAP4*	0.0000	-2.23	4.37	1.96	*MUC1*	0.0041	-1.1	2.14	1.95
CCR5	0.0030	-1	2.04	2.03	*TNFRSF8*	0.0017	1.91	2.12	4.05	*SEC31B*	0.0003	1.16	1.89	2.2
NKG7	0.0004	1.38	1.63	2.26	*LINC00239*	0.0000	-1.08	3.18	2.96	*JUN*	0.0032	-1.23	2.25	1.83
IFNG	0.0058	1.92	1.33	2.55	*CXCR6*	0.0001	1.05	2.99	3.14	*HELB*	0.0004	-1.52	2.45	1.61
LPCAT3	0.0000	-1.2	2.09	1.74	*GLUL*	0.0000	1.09	2.93	3.2	*GNLY*	0.0000	-1.94	2.66	1.37
KLRC1	0.0023	1.09	1.8	1.96	*CEP112*	0.0001	-1.52	3.69	2.43	*KLRD1*	0.0000	-1.74	2.55	1.47
F2R	0.0001	1.21	1.62	1.96	*BCL6*	0.0001	-2.01	4.08	2.03	*RNF213*	0.0000	1.1	1.91	2.1
PLEKHF1	0.0061	-1.07	1.63	1.52	*IGKV3OR2-268*	0.0004	-1.24	3.3	2.66	*LGMN*	0.0039	-1.07	2.07	1.93
CD47	0.0001	-1.06	1.62	1.52	*TJP2*	0.0005	-1.23	3.23	2.63	*GIMAP2*	0.0002	-1.64	2.48	1.51
CCNE1	0.0029	-1.33	1.77	1.33	*LINC00861*	0.0001	-1.92	3.83	1.99	*LINC01550*	0.0008	-1.28	2.23	1.75
GLIPR1	0.0000	-1.47	1.81	1.23	*PDLIM1*	0.0004	1.08	2.7	2.9	*CCDC126*	0.0016	-1.27	2.22	1.75
PLAC8	0.0005	-1.59	1.79	1.12	*LY96*	0.0003	1.66	2.1	3.49	*PLSCR1*	0.0000	-1.07	2.05	1.92
BMPR1A	0.0012	1.26	1.22	1.53	*MAP3K5*	0.0000	-1.22	3.07	2.51	*SPATS2L*	0.0027	1.34	1.7	2.27
PRDM1	0.0064	1.24	1.22	1.51	*NUAK2*	0.0005	-1.47	3.32	2.26	*IGKV3D-7*	0.0001	-1.13	2.1	1.86
SEMA7A	0.0034	1.35	1.15	1.56	*ELOVL4*	0.0004	1.38	2.29	3.16	*LOC101928173*	0.0021	1.68	1.48	2.48
ASXL1	0.0009	-1.35	1.54	1.14	*FBXO32*	0.0002	-1.79	3.44	1.93	*FAM228B*	0.0005	-1.27	2.2	1.74
ZFP36	0.0000	-1.6	3.68	2.31	*GIMAP7*	0.0001	-2.51	3.83	1.53	*ADD2*	0.0001	1.43	1.62	2.31
CD28	0.0004	-1.79	3.39	1.9	*IL26*	0.0053	-1.19	2.91	2.45	*ABCB1*	0.0000	-1.29	2.21	1.71
SBNO2	0.0000	1	2.47	2.47	*TRPS1*	0.0000	1.32	2.31	3.04	*PITPNC1*	0.0000	-1.28	2.2	1.72
ABLIM1	0.0001	-1.66	2.82	1.7	*LOC105373955*	0.0011	-1.27	2.97	2.34	*STRIP2*	0.0040	1.6	1.51	2.4
TIAM1	0.0002	-1.93	2.7	1.4	*IKZF3*	0.0000	-2.09	3.59	1.72	*MVP*	0.0015	-1.18	2.11	1.79
PPP1R3B	0.0011	1.16	1.85	2.15	*SLC9A9*	0.0002	-1.82	3.39	1.87	*ARRDC3*	0.0001	-1.36	2.22	1.64
ITGA3	0.0007	-1.04	1.91	1.84	*TC2N*	0.0000	-2.17	3.52	1.62	*FURIN*	0.0010	1.54	1.52	2.34
CD200R1	0.0003	-2.07	2.47	1.19	*STOM*	0.0000	1.69	1.89	3.18	*GCA*	0.0034	-1.04	1.97	1.89
TBC1D15	0.0008	-1.15	1.81	1.57	*PIK3AP1*	0.0001	-1.03	2.57	2.49	*GRAMD1B*	0.0012	1	1.89	1.89
METRNL	0.0000	1.86	1.17	2.16	*TRIB2*	0.0001	-1.74	3.16	1.82	*HIST1H2BC*	0.0012	1.05	1.83	1.93
RAPGEF6	0.0006	-1.1	1.75	1.58	*KCTD6*	0.0031	1.13	2.34	2.64	*LOC101927902*	0.0004	-1.52	2.26	1.49
ARHGAP12	0.0050	-1.17	1.75	1.5	*GIMAP1*	0.0009	-1.63	3.05	1.87	*TXK*	0.0000	-1.26	2.09	1.66
GPSM2	0.0005	-1.21	1.77	1.46	*ZFYVE28*	0.0000	-1	2.47	2.45	*SLC27A2*	0.0016	1.28	1.64	2.1
GALNT10	0.0016	1.01	1.6	1.62	*TP53INP1*	0.0001	-6.06	5.91	-1.02	*ISG20*	0.0003	-1.6	2.3	1.43
JAK3	0.0086	-1.06	1.63	1.54	*SELL*	0.0000	-3.33	3.72	1.12	*CAPRIN2*	0.0002	-1.22	2.04	1.67
NPC2	0.0002	-1.1	1.66	1.51	*ABCA2*	0.0000	-1.4	2.81	2	*GUSBP11*	0.0004	-1.29	2.09	1.62
IMPA2	0.0079	1.09	1.51	1.65	*GZMH*	0.0001	1.25	2.12	2.65	*PDGFRB*	0.0004	1.39	1.55	2.16
PGS1	0.0006	1.16	1.44	1.68	*SDK2*	0.0027	-1.22	2.59	2.11	*SETBP1*	0.0004	1.6	1.43	2.28
CFLAR	0.0001	-1.87	1.99	1.07	*GAB3*	0.0000	-1.05	2.4	2.29	*PTPN13*	0.0042	1.02	1.83	1.86
CTSA	0.0004	-1.34	1.71	1.28	*MIR21*	0.0002	-1.18	2.53	2.14	*LINC00880*	0.0013	-1.14	1.96	1.72
SIGIRR	0.0067	-1.34	1.68	1.25	*AIM2*	0.0007	1.07	2.25	2.41	*SH3BP5*	0.0004	-2.47	2.61	1.06
IQGAP2	0.0001	-1.16	1.57	1.35	*GIMAP8*	0.0001	-2.08	3.14	1.51	*CSTF2T*	0.0005	1.07	1.76	1.9
IL17RA	0.0062	-1.25	1.53	1.22	*ANKRD20A1*	0.0003	1.15	2.16	2.48	*CD300A*	0.0005	1.61	1.4	2.26
PRPF38B	0.0015	-1.27	1.5	1.18	*CLU*	0.0086	1.12	2.19	2.45	*GSDMB*	0.0000	-1.36	2.1	1.54
SOCS3	0.0000	1.29	3.15	4.06	*KDSR*	0.0000	1.58	1.79	2.84	*LINC01058*	0.0016	-1.66	2.27	1.37
BCL3	0.0004	-1.67	2.51	1.5	*HSBP1L1*	0.0093	-1.56	2.8	1.8	*CD8B*	0.0008	-1.15	1.95	1.69
JUNB	0.0005	-1.58	2.33	1.47	*RARRES3*	0.0011	-2.05	3.08	1.51	*MX2*	0.0089	-1.25	2.01	1.61
BATF	0.0007	-1.07	1.93	1.81	*MIR3143*	0.0080	1.38	1.9	2.63	*JHDM1D*	0.0014	1.12	1.7	1.91
DOCK9	0.0002	-1.47	1.96	1.33	*LOC105370526*	0.0001	1.57	1.76	2.76	*HIVEP2*	0.0002	-1.49	2.15	1.45
SUSD3	0.0026	-1.16	1.64	1.41	*FASLG*	0.0003	-1.13	2.38	2.11	*ACVR1*	0.0002	1.12	1.69	1.9
BCR	0.0004	-1.14	1.54	1.35	*NUGGC*	0.0005	-1.36	2.57	1.89	*CASP8*	0.0013	-1.53	2.17	1.42
DUSP16	0.0001	-1.77	1.84	1.04	*STYK1*	0.0029	1.41	1.84	2.6	*SLAMF6*	0.0000	-1.8	2.31	1.28
DPY19L3	0.0047	-1.27	1.6	1.26	*C8orf88*	0.0082	1.29	1.94	2.5	*TMEM65*	0.0005	2.36	1.07	2.52
MCTP2	0.0008	1.19	1.3	1.54	*PARP9*	0.0024	1.01	2.2	2.23	*ANKRD20A3*	0.0053	1.06	1.73	1.84
NUP98	0.0000	-1.14	1.5	1.32	*LOC389765*	0.0097	1.21	2	2.42	*KLF10*	0.0020	1.05	1.74	1.83
TIPARP	0.0012	-1.21	1.52	1.26	*FAM184A*	0.0024	1.05	2.15	2.25	*CMTM8*	0.0004	1.11	1.69	1.88
TANC2	0.0001	-1.82	9.87	5.41	*PPIAL4E*	0.0027	1.13	2.05	2.31	*GBP2*	0.0000	-1.13	1.89	1.67
SULT1B1	0.0007	-1.24	7.82	6.3	*LUCAT1*	0.0004	1.08	2.08	2.25	*CEP70*	0.0000	-1.52	2.14	1.41
KIAA0226L	0.0002	-1.43	8	5.61	*COL6A3*	0.0092	-1.35	2.47	1.83	*LOC105370333*	0.0038	1.35	1.51	2.04
LOC105370676	0.0000	-1.1	4.73	4.29	*RFX8*	0.0014	-2.35	2.99	1.27	*PHF11*	0.0002	-1.08	1.84	1.71
ZNRF1	0.0000	1.02	4.46	4.55	*INTS10*	0.0000	1.35	1.79	2.42	*LOC102724081*	0.0000	-1.36	2.03	1.49
TRERF1	0.0000	-1.24	4.94	3.99	*RASA3*	0.0000	-1.74	2.66	1.53	*LINC00884*	0.0018	1.11	1.66	1.85
LOC101927613	0.0005	-1.04	4.17	4	*RRAGD*	0.0004	-1.38	2.43	1.76	*PHOSPHO2*	0.0005	1.14	1.64	1.87
RCAN2	0.0004	1.26	3.57	4.48	*DUSP1*	0.0006	-1.67	2.59	1.56	*CD7*	0.0000	-1.11	1.84	1.66

Genes	P-value	Fold Change			Genes	P-value	Fold Change			Genes	P-value	Fold Change		
		28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz
CLEC2B	0.0000	-1.11	1.84	1.66	*ZNF658B*	0.0003	-1.3	1.82	1.39	*UBL3*	0.0006	-1.87	1.96	1.05
PLGLB1	0.0075	-1.25	1.93	1.55	*SYCP2*	0.0016	-1.76	2.04	1.16	*LDAH*	0.0010	-1.15	1.61	1.4
OGFRL1	0.0002	1.02	1.72	1.75	*FAM8A1*	0.0004	-1.37	1.85	1.35	*PFKFB3*	0.0018	-1.21	1.65	1.36
CCDC69	0.0080	-1.03	1.76	1.7	*GPR160*	0.0014	1.32	1.38	1.82	*SGMS1*	0.0009	-1.32	1.71	1.3
SMIM10	0.0011	1.55	1.36	2.1	*LOC100289361*	0.0033	-1	1.6	1.59	*FKBP11*	0.0003	1.35	1.28	1.72
C17orf62	0.0008	1.06	1.68	1.77	*ZNRF2*	0.0006	-1.36	1.84	1.35	*GDPD3*	0.0016	1.07	1.45	1.55
GLUD1	0.0015	1.25	1.54	1.91	*BLVRB*	0.0002	1.11	1.51	1.68	*AGO4*	0.0003	-1.68	1.87	1.12
LOC100507209	0.0040	1.09	1.65	1.8	*IGFBP7*	0.0060	-1.13	1.69	1.5	*BCAT1*	0.0030	1.8	1.07	1.92
SLC2A3	0.0003	1.74	1.26	2.19	*ZFP36L2*	0.0001	-1.85	2.07	1.12	*HEATR5A*	0.0076	1.16	1.39	1.6
CEP162	0.0002	-1.43	2.03	1.42	*CLK1*	0.0001	-1.59	1.95	1.23	*TIMD4*	0.0016	-1.23	1.65	1.34
LOC101929241	0.0012	-1.18	1.86	1.58	*GRAMD1C*	0.0067	-1.56	1.94	1.24	*ADD3*	0.0006	-1.31	1.69	1.29
TCAF2	0.0000	-1.06	1.77	1.67	*LOC100128816*	0.0003	-1.13	1.69	1.49	*OMA1*	0.0006	-1.16	1.6	1.37
WDR59	0.0001	-1.05	1.76	1.68	*METTL23*	0.0006	-1.14	1.69	1.49	*LDOC1L*	0.0077	-1.47	1.77	1.2
SETDB2	0.0000	-1.34	1.97	1.47	*MKRN3*	0.0005	1.19	1.45	1.73	*LOC101928605*	0.0077	1.09	1.42	1.55
ZNF683	0.0034	-1.31	1.95	1.49	*OARD1*	0.0064	-1.13	1.69	1.49	*MTERF2*	0.0051	-1.12	1.57	1.4
GIMAP6	0.0044	-1.92	2.26	1.18	*CXorf57*	0.0035	1.04	1.55	1.62	*OPN3*	0.0066	1.04	1.45	1.52
INADL	0.0001	-1.17	1.85	1.58	*DPY19L1*	0.0053	1.02	1.56	1.6	*ZDBF2*	0.0018	1.26	1.31	1.66
AGTPBP1	0.0001	1.18	1.57	1.85	*GPRIN3*	0.0013	-1	1.58	1.58	*ZNF141*	0.0014	-1.12	1.57	1.4
LAG3	0.0007	1.43	1.41	2.01	*ZNF101*	0.0001	1.06	1.53	1.63	*ZNF350*	0.0000	-1.28	1.67	1.3
FAM46C	0.0019	1.26	1.51	1.9	*ATP2B4*	0.0001	-1.25	1.76	1.4	*KLF3*	0.0003	-1.83	1.91	1.05
PCED1B	0.0013	-1.66	2.13	1.28	*HENMT1*	0.0001	-1.22	1.73	1.42	*FAM160B1*	0.0000	-1.35	1.7	1.26
PHYKPL	0.0000	-1.09	1.78	1.63	*LOC101927027*	0.0032	-1.27	1.76	1.39	*MAN1A1*	0.0012	1.15	1.38	1.58
NARF	0.0000	-1.05	1.74	1.66	*LOC645513*	0.0051	-1.11	1.66	1.49	*PQLC3*	0.0014	-1.17	1.6	1.36
FLJ32255	0.0023	-1.34	1.95	1.45	*ZNF84*	0.0009	-1.31	1.78	1.36	*PTPRCAP*	0.0008	-1.41	1.73	1.23
KLHDC1	0.0041	-1.46	2.02	1.38	*LOC102723540*	0.0084	-2.05	2.11	1.03	*PRG4*	0.0083	-1.8	1.9	1.05
RGS9	0.0006	-1.59	2.08	1.31	*STK17A*	0.0008	-1.21	1.72	1.42	*AQP3*	0.0002	-1.75	1.87	1.07
VWA5A	0.0017	-1.12	1.79	1.6	*RAB38*	0.0012	-1.09	1.63	1.5	*SLC16A7*	0.0005	1.19	1.34	1.6
GPR135	0.0098	-1.07	1.75	1.63	*ADGRE1*	0.0097	-1.35	1.8	1.33	*FAM89B*	0.0034	-1.76	1.88	1.06
LOC105373495	0.0002	-1.52	2.04	1.34	*JAKMIP2*	0.0048	-1.34	1.79	1.34	*GSAP*	0.0012	-1.1	1.54	1.4
MT1L	0.0029	-1.46	2.01	1.37	*UHRF2*	0.0064	-1.11	1.65	1.48	*TLR1*	0.0005	-1.16	1.58	1.35
RWDD2A	0.0008	-1.27	1.89	1.49	*TRIM5*	0.0002	-1.58	1.91	1.21	*ZNF440*	0.0003	-1.3	1.66	1.27
IRAK4	0.0006	-1.22	1.85	1.52	*ACVR2A*	0.0053	-1.4	1.82	1.3	*DHRS12*	0.0004	-1.08	1.51	1.41
PAPD5	0.0020	-1.14	1.79	1.58	*RNFT1*	0.0011	-1.25	1.73	1.39	*GZMM*	0.0010	1.1	1.39	1.53
RNF157	0.0009	1.59	1.3	2.07	*ST6GALNAC3*	0.0052	-1.07	1.61	1.5	*JMJD1C*	0.0016	-1.09	1.52	1.4
ENPP2	0.0084	-1.65	2.09	1.27	*HMGB1*	0.0028	-1.47	1.85	1.26	*TPP1*	0.0001	-1.45	1.73	1.19
MT1F	0.0022	-1.97	2.23	1.13	*NOTCH1*	0.0001	-1.1	1.63	1.48	*CHST12*	0.0009	-1.6	1.79	1.12
FOSB	0.0053	-1.39	1.96	1.4	*CST7*	0.0001	1.37	1.31	1.79	*F5*	0.0038	1.07	1.41	1.5
PAFAH1B3	0.0014	1.11	1.59	1.76	*LOC100996286*	0.0016	-1.67	1.94	1.16	*KDM7A*	0.0005	1.18	1.33	1.58
LOC101060038	0.0023	-1.45	1.98	1.37	*DENND6A*	0.0008	-1.24	1.71	1.39	*MYO1F*	0.0066	-1.34	1.67	1.24
ARIH2	0.0002	1.35	1.42	1.92	*INPP4B*	0.0052	1.16	1.43	1.67	*OASL*	0.0084	1.28	1.28	1.63
NEMP2	0.0025	-1.09	1.74	1.59	*LOC101929947*	0.0027	-1.12	1.64	1.46	*FYB*	0.0001	-1.55	1.76	1.14
NMRK1	0.0026	-1.58	2.04	1.29	*ATF7IP2*	0.0011	-1.78	1.98	1.11	*HIST1H2BE*	0.0068	1.29	1.27	1.63
CCNL1	0.0026	-1.46	1.97	1.36	*CYTH4*	0.0017	-1.51	1.86	1.23	*LZTFL1*	0.0061	-1.08	1.51	1.39
BIN2	0.0001	-1.7	2.09	1.23	*SLC46A3*	0.0003	-1.66	1.93	1.16	*SENP7*	0.0004	-1.44	1.71	1.19
BNIP3	0.0004	1.96	1.12	2.19	*CD9*	0.0020	-1.16	1.66	1.43	*ITGAX*	0.0065	-1.79	1.85	1.04
SATB1	0.0000	1.12	1.56	1.74	*ERMP1*	0.0017	-1.13	1.64	1.45	*ATP8B2*	0.0048	-1.16	1.55	1.34
HS3ST3B1	0.0002	-1.7	2.07	1.22	*IFI6*	0.0076	-1.31	1.75	1.34	*TMEM70*	0.0026	1.45	1.18	1.71
SNORD111B	0.0022	-1.13	1.74	1.55	*MSL3*	0.0016	-1.29	1.74	1.35	*EZH1*	0.0012	-1.55	1.75	1.13
GSDMA	0.0004	-1.22	1.81	1.48	*ATP6V0A1*	0.0089	-1.25	1.71	1.37	*MYLIP*	0.0001	-1.57	1.76	1.12
GSTM4	0.0059	-1.22	1.81	1.48	*C5*	0.0083	-1.42	1.81	1.27	*CRIP1*	0.0001	-1.22	1.58	1.3
ZNF92	0.0046	-1.24	1.82	1.47	*CREBZF*	0.0059	-1.14	1.64	1.44	*HIST1H2BN*	0.0008	-1.21	1.58	1.3
THADA	0.0000	-1.13	1.74	1.54	*OLFM2*	0.0075	-1.33	1.76	1.32	*KLHDC7B*	0.0056	-1.52	1.73	1.14
IFT80	0.0000	-1.62	2.03	1.25	*PDK1*	0.0004	1.33	1.32	1.76	*MALAT1*	0.0015	-1.14	1.53	1.34
PICALM	0.0005	-1.07	1.69	1.58	*FASTKD3*	0.0064	1.02	1.52	1.55	*MXRA7*	0.0052	-1.33	1.64	1.23
GNAI3	0.0058	1.07	1.58	1.68	*BFSP1*	0.0027	-1.36	1.77	1.3	*TAS2R9*	0.0063	1.16	1.33	1.54
IFT88	0.0020	1.03	1.6	1.66	*DHX32*	0.0002	1.35	1.31	1.76	*ABCA5*	0.0028	-1.15	1.53	1.33
ERI2	0.0028	-1.26	1.82	1.44	*DTX3L*	0.0017	1.01	1.52	1.53	*NRSN2*	0.0051	1.16	1.32	1.54
CDC25B	0.0001	-1.83	2.1	1.15	*AAED1*	0.0046	1.13	1.43	1.62	*POLG2*	0.0085	-1.12	1.51	1.35
PCCA	0.0016	-1.03	1.65	1.6	*HIST1H2AL*	0.0007	1.34	1.3	1.75	*LOC105371870*	0.0053	-1.39	1.66	1.2
LRRC8C	0.0077	-1.66	2.02	1.22	*SNTB2*	0.0033	-1.13	1.62	1.43	*ZNF37BP*	0.0057	-1.38	1.66	1.2
SERPINB1	0.0007	-1.24	1.79	1.45	*TPT1*	0.0003	-1.35	1.75	1.3	*ZNF91*	0.0001	-1.41	1.67	1.19
APPL1	0.0004	1.07	1.56	1.67	*GOLGA2P5*	0.0093	-1.18	1.64	1.4	*MGAT4A*	0.0006	-1.32	1.62	1.23
VPS8	0.0024	-1.04	1.65	1.58	*LRRC39*	0.0031	-1.14	1.62	1.42	*CFL2*	0.0082	-1.22	1.56	1.28
FAM214A	0.0001	-1.35	1.85	1.37	*ORMDL3*	0.0001	-1.31	1.72	1.32	*LUC7L*	0.0029	-1.27	1.59	1.25
CLUAP1	0.0005	-1.02	1.63	1.59	*LONP2*	0.0055	-1.73	1.92	1.11	*PPP2R5C*	0.0001	-1.45	1.68	1.16
SSH2	0.0006	-1.06	1.66	1.56	*LINS1*	0.0024	-1.13	1.6	1.42	*CECR5*	0.0055	1.36	1.2	1.63
DTNBP1	0.0008	-1.23	1.78	1.44	*SIAE*	0.0065	-1.04	1.54	1.48	*MAN2A1*	0.0091	-1.3	1.6	1.23
MFGE8	0.0001	-1.54	1.95	1.26	*DKFZP586I1420*	0.0007	-1.68	1.89	1.12	*PRMT2*	0.0026	-1.41	1.66	1.17

Genes	P-value	Fold Change			Genes	P-value	Fold Change			Genes	P-value	Fold Change		
		28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz
PROK2	0.0001	1.26	1.25	1.58	*NAPEPLD*	0.0015	-1.33	1.51	1.13	*TRBV4-2*	0.0088	-1.77	1.63	-1.09
CD226	0.0082	1.36	1.2	1.62	*EPB41*	0.0003	-1.53	1.59	1.04	*AK4*	0.0018	1.63	-1.04	1.57
CLIP4	0.0021	-1.25	1.57	1.25	*ATP8A1*	0.0012	-1.37	1.52	1.11	*REG4*	0.0002	-1.87	1.66	-1.13
LOC100130798	0.0009	1.18	1.3	1.52	*CCDC7*	0.0047	-1.36	1.51	1.11	*TRBJ2-2*	0.0041	-1.9	1.67	-1.14
BIRC2	0.0015	-1.41	1.65	1.17	*INSIG1*	0.0007	-1.46	1.56	1.06	*HACD4*	0.0000	-1.54	1.53	-1.01
FAM21C	0.0020	-1.55	1.71	1.1	*LINC00969*	0.0030	-1.43	1.54	1.08	*KIAA0825*	0.0032	-1.59	1.55	-1.03
TRBV3-1	0.0019	-1.75	1.79	1.02	*LOC105369699*	0.0045	1.34	1.12	1.5	*SLFN5*	0.0001	-1.88	1.66	-1.14
ATF2	0.0000	-1.31	1.59	1.22	*LRRC37A2*	0.0005	-1.34	1.5	1.12	*CD84*	0.0007	-1.77	1.61	-1.1
ETHE1	0.0013	-1.18	1.52	1.29	*LSR*	0.0001	-1.47	1.56	1.06	*PRSS1*	0.0004	-1.84	1.64	-1.13
NIFK	0.0062	-1.15	1.5	1.31	*RDM1*	0.0080	1.35	1.11	1.5	*HLA-DPB2*	0.0039	-2.27	1.78	-1.28
YPEL1	0.0030	-1.18	1.52	1.29	*GTF2IP4*	0.0000	-1.59	1.6	1	*LONRF1*	0.0050	1.57	-1.03	1.53
SAMD3	0.0012	-1.42	1.65	1.16	*MIR4770*	0.0064	1.51	1.03	1.56	*RABGAP1L*	0.0000	-1.63	1.55	-1.05
TMEM198B	0.0003	-1.72	1.77	1.03	*CNN2*	0.0006	-1.44	1.53	1.06	*SBF2*	0.0024	1.52	-1.01	1.51
HEATR3	0.0021	1.22	1.26	1.54	*HSD17B11*	0.0001	-1.43	1.52	1.07	*DNAJB1*	0.0039	-1.55	1.51	-1.02
KIAA1551	0.0003	-1.29	1.58	1.22	*TTC14*	0.0081	-1.44	1.53	1.06	*TRAJ50*	0.0036	-1.52	1.5	-1.01
THEM4	0.0019	-1.22	1.54	1.26	*ALPK1*	0.0041	-1.5	1.55	1.03	*TRBJ2-3*	0.0059	-1.66	1.56	-1.07
TMEM116	0.0013	-1.22	1.54	1.26	*PATZ1*	0.0012	-1.48	1.54	1.04	*TRBV19*	0.0040	-1.64	1.55	-1.06
BRWD3	0.0004	-1.22	1.53	1.26	*SPOCK2*	0.0038	-1.45	1.51	1.04	*BCAS3*	0.0003	-1.92	1.65	-1.17
CDHR1	0.0059	1.18	1.28	1.51	*TRBV20-1*	0.0018	-1.5	1.52	1.01	*EPAS1*	0.0031	2.41	-1.33	1.81
N4BP2L2-IT2	0.0001	-1.23	1.54	1.25	*MYC*	0.0013	1.5	1.01	1.51	*FAM65B*	0.0001	-2.04	1.69	-1.21
ODF2L	0.0021	-1.23	1.54	1.25	*TRBV9*	0.0063	-1.51	1.52	1	*NAP1L4*	0.0001	-1.65	1.55	-1.07
SNRPN	0.0062	-1.3	1.58	1.21	*GPR155*	0.0003	-3.35	3.12	-1.07	*PNRC1*	0.0009	-1.55	1.51	-1.03
APH1B	0.0002	-1.24	1.54	1.24	*TCF7*	0.0001	-5.83	3.33	-1.75	*RPS6KA3*	0.0000	-1.66	1.55	-1.07
DDX26B	0.0002	-1.4	1.62	1.16	*FCMR*	0.0009	-3.31	2.65	-1.25	*SLFN13*	0.0084	1.68	-1.08	1.56
GABPB1	0.0012	1.19	1.26	1.51	*GZMK*	0.0001	-4.39	2.88	-1.53	*ITM2B*	0.0002	-1.5	1.49	-1.01
LOC100506100	0.0014	-1.34	1.59	1.18	*YPEL3*	0.0026	-2.62	2.35	-1.11	*CD52*	0.0016	-1.76	1.58	-1.11
TBC1D31	0.0018	1.31	1.2	1.57	*STK38*	0.0001	-2.22	2.21	-1	*WDTC1*	0.0027	-1.67	1.55	-1.08
ZC3H12B	0.0003	-1.28	1.55	1.22	*TRANK1*	0.0000	-2.3	2.2	-1.04	*FAM13B*	0.0005	-1.81	1.59	-1.13
RNASEH2B	0.0005	-1.43	1.63	1.14	*TUBA1A*	0.0001	-2.68	2.3	-1.17	*ABCD2*	0.0001	-1.63	1.53	-1.07
PAM	0.0049	1.21	1.25	1.51	*IL6ST*	0.0001	-2.11	2.11	-1	*XBP1*	0.0014	1.67	-1.08	1.54
TMX4	0.0007	-1.34	1.58	1.18	*FAM102A*	0.0002	-2.8	2.27	-1.24	*TRBV6-5*	0.0070	-1.51	1.48	-1.02
GALNT3	0.0012	1.67	1.03	1.72	*PIK3IP1*	0.0063	-2.37	2.13	-1.12	*AGBL2*	0.0015	-2.03	1.67	-1.22
LOC102724587	0.0077	1.72	1.01	1.74	*CALCOCO1*	0.0000	-2.17	2.01	-1.08	*GTF2IRD2*	0.0054	-1.65	1.53	-1.08
GAS5	0.0073	-1.48	1.64	1.11	*PGAP1*	0.0039	2.1	-1.06	1.98	*ZNF117*	0.0019	-1.91	1.62	-1.18
LOC105377576	0.0049	1.22	1.24	1.51	*SCML4*	0.0002	-2.19	2.01	-1.09	*MIR181B1*	0.0011	-1.98	1.64	-1.2
RTP4	0.0029	-1.35	1.58	1.17	*TM6SF1*	0.0033	3.69	-1.53	2.41	*TSHR*	0.0007	-1.87	1.6	-1.17
CRBN	0.0000	-1.38	1.59	1.15	*CCDC53*	0.0000	-1.92	1.89	-1.02	*LINC00426*	0.0012	-1.95	1.63	-1.2
GLDC	0.0050	1.22	1.23	1.51	*FMO4*	0.0013	-1.92	1.89	-1.02	*TXLNGY*	0.0046	-1.69	1.53	-1.1
STK3	0.0087	1.23	1.23	1.51	*PYHIN1*	0.0017	-1.93	1.88	-1.03	*ANKRD10*	0.0001	-1.6	1.49	-1.07
PS1TP4	0.0077	1.6	1.05	1.68	*LOC101929305*	0.0002	2.38	-1.19	2	*TRBV4-1*	0.0000	-1.69	1.52	-1.11
ACTR3C	0.0055	-1.37	1.58	1.15	*MZB1*	0.0017	1.89	-1.03	1.84	*PRCP*	0.0012	-1.53	1.46	-1.05
CCDC18	0.0025	-1.21	1.5	1.23	*ADHFE1*	0.0010	-1.89	1.83	-1.03	*TCP11L2*	0.0055	-2.36	1.75	-1.35
NT5C2	0.0008	-1.36	1.57	1.16	*BTN3A3*	0.0015	-1.99	1.87	-1.07	*CCDC64*	0.0056	-1.52	1.45	-1.05
ZNF585A	0.0047	-1.22	1.5	1.23	*CTSO*	0.0039	-2.26	1.94	-1.16	*SLC25A46*	0.0001	-1.52	1.45	-1.05
DDX58	0.0012	-1.64	1.69	1.03	*EOMES*	0.0030	-2.06	1.88	-1.1	*SAMD9*	0.0001	-1.7	1.51	-1.12
N4BP2L1	0.0004	-1.59	1.67	1.05	*MVB12B*	0.0001	-1.89	1.81	-1.05	*MGC70870*	0.0058	-1.55	1.45	-1.07
KBTBD3	0.0013	-1.39	1.58	1.14	*IL1RAP*	0.0003	2.5	-1.26	1.99	*HLA-DPB1*	0.0083	-2.13	1.66	-1.29
NLRP1	0.0003	-1.27	1.52	1.2	*TRAV8-3*	0.0001	-1.86	1.77	-1.06	*RUNX2*	0.0004	-1.67	1.49	-1.12
S100A10	0.0000	-1.38	1.58	1.14	*METTL7A*	0.0001	-2.61	2.01	-1.3	*LOC105369652*	0.0058	-1.55	1.44	-1.08
CCDC146	0.0010	-1.71	1.71	1	*IL7R*	0.0035	-2.88	2.08	-1.38	*HBP1*	0.0000	-1.53	1.42	-1.07
SLC39A10	0.0059	1.26	1.2	1.51	*LINC00324*	0.0043	-1.88	1.77	-1.07	*KLF9*	0.0019	1.85	-1.2	1.54
RNF144A	0.0015	1.37	1.14	1.56	*YPEL5*	0.0010	-1.76	1.72	-1.03	*PWAR5*	0.0041	1.69	-1.14	1.48
SERINC5	0.0000	-1.45	1.6	1.1	*LEF1*	0.0000	-2.14	1.82	-1.17	*TRBV20OR9-2*	0.0005	-1.68	1.48	-1.14
BTN3A2	0.0023	-1.44	1.59	1.1	*CREB3L3*	0.0011	-1.75	1.68	-1.04	*IMPACT*	0.0054	-1.54	1.42	-1.08
AOAH	0.0048	-1.61	1.66	1.03	*CLK4*	0.0000	-1.68	1.65	-1.02	*PARP15*	0.0010	-1.59	1.44	-1.1
ERP27	0.0058	-1.64	1.67	1.02	*EPSTI1*	0.0004	-1.75	1.68	-1.05	*HOOK1*	0.0065	2.42	-1.4	1.73
ANXA5	0.0054	-1.36	1.55	1.14	*H3F3A*	0.0014	-1.63	1.62	-1	*ZBED6*	0.0021	-1.51	1.41	-1.08
LOC100505549	0.0009	-1.33	1.53	1.15	*TRBV28*	0.0031	-2.17	1.81	-1.2	*LOC105373934*	0.0065	-1.78	1.5	-1.18
C9orf72	0.0009	1.29	1.16	1.5	*PARP8*	0.0001	-1.65	1.62	-1.02	*PARP12*	0.0074	-1.59	1.43	-1.11
GUSBP5	0.0070	-1.35	1.53	1.13	*APOL3*	0.0094	-1.73	1.65	-1.05	*JCHAIN*	0.0030	-1.87	1.53	-1.22
LINC01578	0.0013	-1.33	1.52	1.14	*GTF2IP1*	0.0000	-1.59	1.59	-1	*KLRC4*	0.0000	-1.92	1.53	-1.25
XRN1	0.0012	-1.39	1.55	1.11	*HLA-DMA*	0.0025	-2.21	1.81	-1.22	*PPP3CB*	0.0000	-1.78	1.48	-1.2
RALGDS	0.0005	-1.37	1.53	1.12	*CD27*	0.0007	-1.81	1.66	-1.09	*CAMK4*	0.0007	-1.64	1.42	-1.15
SLC44A1	0.0003	-1.37	1.53	1.12	*AKAP13*	0.0000	-1.61	1.58	-1.02	*CREBRF*	0.0000	-1.57	1.4	-1.13
SAMD9L	0.0004	-1.6	1.63	1.02	*ZNF362*	0.0092	-1.64	1.59	-1.03	*S1PR1*	0.0001	-1.59	1.4	-1.14
BTN3A1	0.0003	-1.47	1.57	1.07	*CDKN1B*	0.0007	-1.58	1.56	-1.01	*TRAJ3*	0.0014	-1.5	1.36	-1.1
SAT1	0.0035	-1.35	1.52	1.12	*SLAMF7*	0.0003	-1.73	1.62	-1.07	*TRAJ35*	0.0086	-1.83	1.49	-1.23
EVI2A	0.0052	-1.32	1.5	1.14	*HERC6*	0.0029	-1.92	1.68	-1.14	*TRAJ56*	0.0092	-1.67	1.43	-1.17

Genes	P-value	Fold Change			Genes	P-value	Fold Change			Genes	P-value	Fold Change		
		28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz
SORL1	0.0009	-2.05	1.56	-1.31	*LOC105376895*	0.0077	-1.53	1.23	-1.24	*GARS*	0.0003	2.17	-1.6	1.36
LOC153684	0.0027	-1.56	1.38	-1.13	*CECR1*	0.0004	-2.2	1.47	-1.49	*LOC105369536*	0.0015	-1.78	1.22	-1.46
TNRC6C	0.0013	-1.66	1.42	-1.17	*EHD3*	0.0048	-2.2	1.47	-1.49	*MTX2*	0.0015	1.59	-1.39	1.15
PGM2L1	0.0008	-1.69	1.42	-1.19	*HLA-DPA1*	0.0095	-1.88	1.36	-1.39	*TBC1D24*	0.0011	1.9	-1.51	1.26
PRNP	0.0001	1.55	-1.14	1.36	*HOMER1*	0.0011	1.58	-1.27	1.24	*NARS*	0.0001	1.62	-1.4	1.15
BZRAP1	0.0004	-1.98	1.52	-1.3	*ZC3H12D*	0.0041	-2.48	1.55	-1.59	*DDIT3*	0.0038	2.06	-1.57	1.31
APOLD1	0.0019	-1.85	1.47	-1.25	*CPPED1*	0.0040	1.54	-1.26	1.22	*SSBP2*	0.0001	-2.61	1.49	-1.75
TBCEL	0.0022	-1.75	1.44	-1.22	*PSMG1*	0.0003	1.74	-1.34	1.3	*CENPV*	0.0072	1.61	-1.41	1.15
FAM129A	0.0003	-1.56	1.36	-1.15	*TUBGCP4*	0.0007	1.56	-1.27	1.23	*SNRK*	0.0001	-1.65	1.16	-1.42
TRDC	0.0032	-1.8	1.45	-1.24	*FIGNL1*	0.0022	1.57	-1.28	1.23	*P4HA1*	0.0003	1.69	-1.44	1.17
GCLM	0.0000	1.53	-1.14	1.34	*GRPEL2*	0.0005	1.75	-1.35	1.3	*AP4E1*	0.0092	1.56	-1.4	1.12
RAB5B	0.0011	-1.63	1.38	-1.18	*HGSNAT*	0.0005	-1.65	1.26	-1.31	*LRRC8D*	0.0062	-1.54	1.11	-1.39
CLIP3	0.0069	-1.54	1.34	-1.15	*RAPGEF4*	0.0072	-1.57	1.23	-1.28	*TRAJ34*	0.0042	-1.52	1.1	-1.38
LOC101927746	0.0094	1.57	-1.16	1.35	*SLC43A1*	0.0080	1.81	-1.37	1.32	*UBE2MP1*	0.0087	1.57	-1.4	1.12
LOC105376146	0.0033	1.82	-1.26	1.45	*TMEM147*	0.0035	1.57	-1.28	1.23	*DESI1*	0.0013	1.94	-1.54	1.26
RSRP1	0.0004	-1.64	1.38	-1.19	*YARS*	0.0014	1.73	-1.34	1.29	*MLLT3*	0.0005	1.62	-1.42	1.14
TRAV41	0.0036	-1.66	1.39	-1.2	*SLC12A6*	0.0004	-1.87	1.34	-1.4	*CIITA*	0.0020	-2.65	1.49	-1.78
CCDC28A	0.0093	-1.55	1.34	-1.16	*SIRPB1*	0.0085	-1.76	1.3	-1.36	*TARS*	0.0008	1.6	-1.42	1.13
MIR2114	0.0071	1.75	-1.24	1.42	*IKBKE*	0.0033	-1.68	1.26	-1.33	*LOC102724463*	0.0088	-1.59	1.12	-1.42
CEBPB	0.0001	2.03	-1.34	1.51	*NDUFAF2*	0.0041	1.6	-1.3	1.23	*LPP*	0.0031	1.69	-1.46	1.16
ATM	0.0000	-1.84	1.44	-1.27	*RWDD2B*	0.0003	-1.5	1.19	-1.26	*TAF9B*	0.0000	-1.67	1.15	-1.45
PDIA5	0.0060	1.66	-1.21	1.38	*USP12*	0.0012	1.58	-1.29	1.22	*DDX21*	0.0085	1.52	-1.4	1.09
CUX1	0.0033	-1.51	1.31	-1.15	*SLC3A2*	0.0040	2.69	-1.68	1.6	*PTPN3*	0.0025	-1.74	1.17	-1.48
HIPK1	0.0000	-1.6	1.34	-1.19	*ERRFI1*	0.0086	1.59	-1.3	1.22	*EPRS*	0.0003	1.59	-1.43	1.11
RORA	0.0025	-1.54	1.32	-1.17	*HOXB9*	0.0033	1.81	-1.39	1.3	*POU5F1P4*	0.0099	1.5	-1.4	1.08
TRAV26-1	0.0019	-1.6	1.34	-1.19	*MT2A*	0.0080	-1.52	1.19	-1.28	*PRPF6*	0.0054	-1.51	1.08	-1.4
TRAJ32	0.0011	-1.55	1.32	-1.18	*NLK*	0.0004	-1.62	1.23	-1.32	*PASK*	0.0013	-1.94	1.24	-1.56
HK2	0.0024	2.07	-1.37	1.51	*WDR48*	0.0005	-1.62	1.23	-1.32	*TEC*	0.0010	-1.79	1.19	-1.51
INPP5K	0.0009	-1.52	1.3	-1.17	*LOC105371692*	0.0047	-1.78	1.28	-1.38	*HAX1*	0.0057	1.75	-1.49	1.17
TRAV12-3	0.0035	-1.54	1.31	-1.18	*TRGJP2*	0.0000	-1.64	1.23	-1.33	*ARPC5L*	0.0019	1.54	-1.42	1.09
PRDM8	0.0018	-1.9	1.44	-1.31	*DIAPH3*	0.0044	1.64	-1.34	1.23	*CTPS1*	0.0042	1.57	-1.43	1.1
NLRC5	0.0002	-1.64	1.34	-1.22	*IPCEF1*	0.0015	-1.85	1.3	-1.42	*FRMD4B*	0.0000	1.77	-1.51	1.18
ODC1	0.0093	1.58	-1.2	1.32	*LINC00662*	0.0069	1.84	-1.42	1.3	*PXK*	0.0006	1.56	-1.43	1.09
ZCCHC8	0.0006	1.54	-1.18	1.3	*LOC105377891*	0.0004	-1.9	1.32	-1.44	*CCR4*	0.0079	-1.9	1.22	-1.56
CCR7	0.0012	-1.77	1.39	-1.27	*ATF4*	0.0043	1.59	-1.32	1.2	*SCD*	0.0002	1.65	-1.47	1.13
LOC101928100	0.0000	-1.96	1.46	-1.34	*RSL24D1*	0.0000	1.62	-1.33	1.21	*ZBED2*	0.0022	2.72	-1.83	1.48
NUDCD1	0.0039	1.55	-1.2	1.3	*SLC16A1*	0.0025	1.86	-1.43	1.3	*UBE2E2*	0.0018	1.53	-1.43	1.07
FAM27E3	0.0010	2.27	-1.47	1.55	*IFRD2*	0.0092	1.5	-1.3	1.16	*TRGV9*	0.0019	-1.68	1.13	-1.49
ARID4B	0.0003	-1.59	1.3	-1.22	*ITGA2*	0.0006	1.63	-1.35	1.21	*AP3M2*	0.0062	1.52	-1.43	1.06
BACH1-IT2	0.0068	1.63	-1.24	1.32	*YME1L1*	0.0030	-1.53	1.17	-1.31	*CKAP2L*	0.0018	1.51	-1.43	1.06
LOC102724601	0.0016	-2.05	1.47	-1.39	*CRLF2*	0.0040	-1.83	1.28	-1.43	*ELK1*	0.0047	1.61	-1.47	1.1
MYB	0.0001	-1.79	1.38	-1.3	*LRP8*	0.0050	1.93	-1.47	1.32	*IFRD1*	0.0010	1.61	-1.47	1.1
KLHL24	0.0026	-2.18	1.51	-1.44	*C9orf91*	0.0039	1.5	-1.3	1.15	*CARD6*	0.0001	-1.72	1.14	-1.51
MTSS1L	0.0036	-1.65	1.32	-1.25	*CHAC1*	0.0020	5.83	-2.49	2.34	*DLG3*	0.0001	1.75	-1.52	1.15
RAP1GAP2	0.0002	-1.55	1.28	-1.21	*WIPI1*	0.0001	2.2	-1.56	1.4	*LYRM1*	0.0000	1.94	-1.59	1.22
WDR78	0.0000	-1.62	1.31	-1.24	*LRRC34*	0.0008	2.03	-1.51	1.34	*BPGM*	0.0001	1.5	-1.43	1.05
LINC00954	0.0060	-1.61	1.3	-1.24	*NCOA1*	0.0043	-1.57	1.17	-1.34	*CHAC2*	0.0008	1.57	-1.46	1.08
MPP1	0.0045	1.95	-1.37	1.43	*GM2A*	0.0050	-1.76	1.24	-1.42	*EBNA1BP2*	0.0000	1.5	-1.43	1.05
PTPRJ	0.0007	-1.72	1.34	-1.29	*LINC-PINT*	0.0046	1.96	-1.49	1.31	*UHRF1BP1L*	0.0003	1.56	-1.45	1.07
RFXAP	0.0029	1.7	-1.28	1.33	*LOC105378011*	0.0004	-1.86	1.28	-1.46	*ZC3H7A*	0.0003	-1.6	1.09	-1.47
RPF2	0.0008	1.6	-1.24	1.29	*ARHGAP18*	0.0002	1.6	-1.36	1.18	*XPOT*	0.0002	1.73	-1.52	1.14
TWSG1	0.0056	1.55	-1.22	1.27	*HRH2*	0.0047	1.59	-1.35	1.17	*LONP1*	0.0006	2.15	-1.67	1.28
WDR7	0.0002	-1.5	1.25	-1.2	*ABAT*	0.0032	-2.11	1.36	-1.55	*TRGC2*	0.0006	-1.59	1.08	-1.47
CYTIP	0.0001	1.51	-1.21	1.25	*KDM5B*	0.0043	-1.77	1.24	-1.43	*LOC100506928*	0.0014	-1.52	1.05	-1.45
SNORA84	0.0023	1.88	-1.35	1.39	*MTHFD2*	0.0001	2.07	-1.54	1.34	*RLN3*	0.0005	-1.58	1.07	-1.47
MAP3K8	0.0056	-1.5	1.24	-1.21	*LOC101928421*	0.0076	-1.71	1.21	-1.41	*MALT1*	0.0000	-1.73	1.13	-1.53
SKA1	0.0089	1.5	-1.21	1.24	*LOC101928979*	0.0082	-1.57	1.16	-1.36	*GDF11*	0.0003	-1.72	1.12	-1.53
TRAJ22	0.0007	-1.52	1.25	-1.22	*PDE3B*	0.0000	-1.6	1.17	-1.37	*SARS*	0.0008	2.22	-1.71	1.3
TSEN15	0.0050	1.94	-1.38	1.41	*TSR1*	0.0003	1.5	-1.33	1.13	*NBPF20*	0.0058	-1.51	1.04	-1.45
MAL	0.0051	-1.93	1.4	-1.37	*SLC7A5*	0.0023	3.2	-1.9	1.69	*SHMT2*	0.0024	1.57	-1.48	1.07
FAM84B	0.0006	2.49	-1.57	1.59	*ALDH1L2*	0.0000	2.16	-1.58	1.37	*SLC8A1*	0.0042	1.84	-1.58	1.17
NOTCH2NL	0.0094	-1.93	1.4	-1.38	*HSPA13*	0.0002	1.74	-1.43	1.22	*ARG2*	0.0017	1.7	-1.53	1.11
TRAJ13	0.0053	-1.68	1.31	-1.29	*FKBP4*	0.0054	1.56	-1.36	1.15	*ATXN1*	0.0015	-1.65	1.09	-1.51
DDIT4	0.0052	2.45	-1.56	1.56	*CYSLTR1*	0.0000	-1.68	1.19	-1.41	*ORAI3*	0.0019	-1.73	1.12	-1.54
TRDJ2	0.0074	-1.99	1.41	-1.41	*ZER1*	0.0041	-1.75	1.22	-1.44	*SLC43A2*	0.0034	-1.5	1.03	-1.45
CXorf65	0.0023	-2.24	1.49	-1.5	*IQCB1*	0.0074	1.61	-1.39	1.16	*MTAP*	0.0000	1.76	-1.55	1.13
ITGA4	0.0000	-1.79	1.33	-1.34	*TTC24*	0.0017	-1.51	1.12	-1.35	*MAP3K14*	0.0024	-1.71	1.11	-1.54
LITAF	0.0004	-1.83	1.35	-1.36	*MZT1*	0.0034	1.55	-1.37	1.14	*SETD7*	0.0001	2.43	-1.79	1.36

Genes	P-value	Fold Change			Genes	P-value	Fold Change			Genes	P-value	Fold Change		
		28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz
LYSMD2	0.0011	-1.54	1.05	-1.48	*MARS*	0.0019	2.22	-2.02	1.1	*LOC100128364*	0.0023	-1.32	-1.17	-1.54
C14orf105	0.0033	1.76	-1.56	1.13	*SLC1A5*	0.0023	2.48	-2.1	1.18	*MPZL2*	0.0041	1.46	-1.61	-1.1
SLC39A14	0.0005	1.8	-1.57	1.14	*OLMALINC*	0.0007	1.99	-1.95	1.02	*PDCD2L*	0.0040	1.33	-1.55	-1.16
ZMIZ2	0.0000	-1.72	1.11	-1.55	*C5orf28*	0.0000	2.07	-2	1.04	*SPAG1*	0.0018	1.4	-1.58	-1.13
CBS	0.0014	1.89	-1.61	1.17	*TUBE1*	0.0001	2.64	-2.18	1.21	*TRGV10*	0.0001	-1.48	-1.09	-1.62
LOC105378019	0.0054	-1.91	1.18	-1.62	*ATF3*	0.0035	2.21	-2.06	1.08	*NAGK*	0.0000	-1.63	-1.03	-1.69
CCDC159	0.0007	-1.54	1.04	-1.49	*ENPP3*	0.0076	-1.99	1	-1.98	*REL*	0.0032	-1.35	-1.16	-1.56
PUM3	0.0009	1.51	-1.47	1.02	*P2RY14*	0.0001	-3.35	1.4	-2.39	*STRADB*	0.0029	1.28	-1.53	-1.19
CEBPG	0.0028	1.87	-1.61	1.16	*CRTAM*	0.0001	-2.29	1.09	-2.11	*BSPRY*	0.0010	1.43	-1.6	-1.12
CD38	0.0018	-1.55	1.04	-1.5	*PSAT1*	0.0014	2.99	-2.33	1.28	*MAPKAPK3*	0.0014	1.69	-1.72	-1.01
MIR4789	0.0007	1.58	-1.51	1.05	*COL6A1*	0.0017	-2.41	1.1	-2.19	*CPXM1*	0.0016	1.22	-1.5	-1.23
SPECC1L	0.0001	1.51	-1.48	1.02	*ASNS*	0.0008	3.02	-2.37	1.27	*DGKI*	0.0025	-1.42	-1.13	-1.6
ORAI2	0.0033	-1.82	1.14	-1.6	*CHRM3*	0.0060	2.84	-2.33	1.22	*TRIM44*	0.0011	-1.26	-1.21	-1.52
GBP4	0.0000	-2.3	1.3	-1.77	*CD79A*	0.0022	-2.72	1.18	-2.3	*TESPA1*	0.0010	-1.63	-1.04	-1.7
LOC101928152	0.0058	-1.58	1.04	-1.51	*LAPTM4B*	0.0006	2.24	-2.16	1.04	*GOLGA8R*	0.0025	1.43	-1.61	-1.13
SPRYD7	0.0029	1.62	-1.53	1.06	*ELOVL6*	0.0000	2.23	-2.16	1.03	*SAMSN1*	0.0026	1.28	-1.54	-1.2
VEGFA	0.0000	2.62	-1.87	1.4	*SLCO4C1*	0.0028	3.06	-2.41	1.27	*CMSS1*	0.0017	1.72	-1.74	-1.01
KIF21B	0.0023	1.68	-1.56	1.08	*PMAIP1*	0.0001	2.55	-2.27	1.12	*WI2-87327B8.2*	0.0013	4.55	-3.91	1.16
MT1CP	0.0005	-1.64	1.06	-1.55	*GPAT3*	0.0005	2.35	-2.24	1.05	*ATP1B1*	0.0001	1.48	-1.64	-1.11
CXCL8	0.0034	1.52	-1.51	1.01	*SLC7A11*	0.0008	4.73	-2.87	1.65	*ELMSAN1*	0.0088	-1.47	-1.11	-1.64
IARS	0.0009	1.56	-1.52	1.02	*IGF1*	0.0003	2.31	-2.28	1.01	*EPS8*	0.0009	1.41	-1.61	-1.14
PTGER4	0.0002	-1.93	1.16	-1.66	*GPT2*	0.0003	2.47	-2.41	1.02	*SLC29A3*	0.0023	-1.24	-1.23	-1.52
SLC7A5P1	0.0045	1.51	-1.5	1	*OSBPL6*	0.0049	2.66	-2.48	1.07	*SYNE3*	0.0022	1.42	-1.61	-1.14
LOC105371220	0.0013	-2.92	1.47	-1.98	*HLA-DQA1*	0.0027	-2.87	1.11	-2.59	*TUBB6*	0.0077	1.34	-1.57	-1.18
ASCL4	0.0031	-1.61	1.03	-1.56	*LOC284561*	0.0022	3.7	-3.29	1.12	*MFHAS1*	0.0015	1.44	-1.63	-1.13
FAM129B	0.0027	1.96	-1.69	1.16	*KIAA1324*	0.0004	-4.65	1.31	-3.56	*MIR4725*	0.0051	-1.37	-1.16	-1.6
ICOSLG	0.0027	-1.58	1.02	-1.55	*LOC102723766*	0.0033	-3.55	1.05	-3.39	*PDLIM7*	0.0014	1.45	-1.63	-1.13
MLST8	0.0044	1.63	-1.57	1.04	*LMO4*	0.0006	1.49	-1.5	-1.01	*ABCC1*	0.0012	-1.29	-1.21	-1.56
PCK2	0.0076	2.19	-1.77	1.24	*C20orf197*	0.0033	1.5	-1.52	-1.01	*PRKCA*	0.0049	1.33	-1.58	-1.19
POLR3G	0.0016	2.26	-1.79	1.26	*SFXN1*	0.0001	1.45	-1.5	-1.04	*CARS*	0.0036	1.75	-1.77	-1.01
LOC105373862	0.0017	-2.59	1.36	-1.9	*TRAV1-2*	0.0032	-1.47	-1.03	-1.51	*LOC101928140*	0.0032	-1.7	-1.03	-1.75
ANKRD11	0.0006	1.56	-1.55	1.01	*CCDC58*	0.0034	1.46	-1.51	-1.04	*RRP12*	0.0041	1.63	-1.72	-1.06
CD74	0.0007	-1.56	1.01	-1.55	*GPR15*	0.0050	-1.45	-1.04	-1.51	*CASP3*	0.0032	1.31	-1.58	-1.2
SAMD10	0.0007	-1.92	1.14	-1.68	*GYPA*	0.0005	1.42	-1.5	-1.06	*P2RY10*	0.0019	-1.61	-1.07	-1.73
ASS1	0.0021	1.77	-1.63	1.08	*ARID3B*	0.0003	1.51	-1.55	-1.03	*GJB2*	0.0001	1.24	-1.55	-1.25
PRDM2	0.0001	-1.81	1.09	-1.65	*DNAJC6*	0.0010	1.51	-1.55	-1.03	*IRF2BPL*	0.0001	1.39	-1.63	-1.17
SLC7A1	0.0010	2.08	-1.75	1.19	*FBXO22*	0.0028	1.46	-1.53	-1.05	*MBTPS2*	0.0012	1.29	-1.58	-1.22
ATXN7L1	0.0007	-1.87	1.11	-1.68	*MYBBP1A*	0.0035	1.39	-1.5	-1.08	*USP22*	0.0000	1.16	-1.5	-1.3
CTDSPL	0.0023	-2.53	1.33	-1.9	*PHTF2*	0.0061	1.57	-1.58	-1.01	*LOC105369785*	0.0030	1.19	-1.53	-1.28
ADAM9	0.0011	1.87	-1.69	1.11	*ERI1*	0.0008	1.58	-1.59	-1.01	*SAMD4A*	0.0093	1.29	-1.58	-1.23
TIMM44	0.0011	2.11	-1.77	1.19	*C12orf57*	0.0007	-1.38	-1.1	-1.51	*TRPV3*	0.0018	-1.26	-1.24	-1.57
RAB39B	0.0009	1.72	-1.64	1.05	*RAD23A*	0.0001	1.44	-1.54	-1.07	*GSTA4*	0.0008	1.58	-1.73	-1.09
GXYLT2	0.0000	-8.47	2.62	-3.23	*LINC00341*	0.0006	1.5	-1.57	-1.05	*EEF2K*	0.0040	1.18	-1.53	-1.29
BCL2L11	0.0063	-2.12	1.18	-1.8	*ABCF2*	0.0036	1.43	-1.55	-1.08	*TRPM2*	0.0064	1.56	-1.72	-1.11
SLC6A9	0.0019	2.75	-2.01	1.37	*LINC01395*	0.0046	-1.37	-1.11	-1.52	*JARID2*	0.0008	-1.16	-1.31	-1.52
CDR2	0.0006	-1.65	1	-1.64	*PACSIN2*	0.0004	1.46	-1.56	-1.07	*TNFSF13*	0.0078	1.39	-1.65	-1.18
EIF4EBP1	0.0004	2.32	-1.89	1.23	*PAK1*	0.0002	1.43	-1.55	-1.09	*C17orf51*	0.0001	4.17	-3.91	1.07
GADD45A	0.0000	1.96	-1.77	1.11	*ZMIZ1*	0.0076	-1.3	-1.15	-1.5	*XAF1*	0.0003	-1.79	-1.02	-1.82
TRIB3	0.0083	2.24	-1.86	1.2	*LOC100129203*	0.0023	-1.55	-1.04	-1.61	*HAS1*	0.0061	-1.13	-1.34	-1.5
PDE7A	0.0000	-2.11	1.15	-1.84	*VARS*	0.0056	1.52	-1.6	-1.05	*IFIH1*	0.0022	-1.5	-1.14	-1.71
STC2	0.0048	2.63	-2.01	1.31	*SPATA5*	0.0006	1.49	-1.59	-1.06	*IRF2BP2*	0.0021	-1.44	-1.17	-1.69
NEDD9	0.0011	1.84	-1.75	1.05	*UGCG*	0.0041	1.52	-1.6	-1.06	*TNFRSF10B*	0.0054	1.46	-1.7	-1.16
IL2RA	0.0000	2.1	-1.84	1.14	*ARHGEF9*	0.0007	-1.3	-1.16	-1.5	*ARSB*	0.0023	1.67	-1.79	-1.07
SIRT1	0.0001	2.15	-1.87	1.15	*RNASEK*	0.0005	-1.46	-1.08	-1.58	*NFIL3*	0.0001	1.56	-1.75	-1.12
LGALS9C	0.0006	-1.78	1.02	-1.75	*GFPT1*	0.0054	1.57	-1.63	-1.04	*KLHL2*	0.0008	1.45	-1.7	-1.17
VLDLR	0.0006	4.31	-2.48	1.74	*CRY1*	0.0021	1.45	-1.58	-1.09	*PLCB1*	0.0079	1.26	-1.6	-1.27
GPR55	0.0022	-2.05	1.11	-1.85	*LOC102725168*	0.0046	1.35	-1.53	-1.14	*SERTAD2*	0.0002	-1.13	-1.35	-1.52
XPO5	0.0001	1.76	-1.75	1	*NEK7*	0.0000	1.34	-1.53	-1.14	*ELL2*	0.0008	1.16	-1.55	-1.33
MTHFD1L	0.0000	2.25	-1.94	1.16	*HEMK1*	0.0014	1.56	-1.63	-1.05	*NFKB1*	0.0004	-1.17	-1.33	-1.55
GPR174	0.0003	-1.82	1.01	-1.8	*RERE*	0.0030	1.46	-1.59	-1.09	*PLXNA1*	0.0003	1.18	-1.56	-1.32
NLN	0.0062	1.95	-1.85	1.05	*DNAAF5*	0.0025	1.29	-1.51	-1.18	*SSBP3*	0.0003	1.18	-1.56	-1.32
TSPAN33	0.0084	-1.98	1.06	-1.87	*FASN*	0.0034	1.47	-1.6	-1.09	*STAM*	0.0006	-1.1	-1.37	-1.51
TSPAN2	0.0001	-4.72	1.8	-2.63	*MDC1*	0.0002	-1.43	-1.11	-1.58	*TGFBR1*	0.0058	1.27	-1.61	-1.27
LOC102723769	0.0036	-2.08	1.08	-1.92	*STK40*	0.0093	1.51	-1.62	-1.08	*PSTPIP2*	0.0007	1.38	-1.68	-1.21
SPINK2	0.0009	-1.95	1.03	-1.89	*BMF*	0.0051	-1.27	-1.19	-1.51	*AARS*	0.0034	1.79	-1.85	-1.04
DLGAP1	0.0013	2.53	-2.08	1.21	*KBTBD8*	0.0061	1.62	-1.67	-1.04	*GOLGA8O*	0.0005	1.65	-1.8	-1.09
CTH	0.0002	7.5	-3.21	2.33	*TRGV3*	0.0016	-1.58	-1.05	-1.66	*LOC105373212*	0.0021	-1.66	-1.09	-1.8
SLC28A3	0.0005	-2.46	1.19	-2.08	*FAM126A*	0.0002	1.24	-1.5	-1.21	*CDKL1*	0.0010	-1.18	-1.32	-1.57

Genes	P-value	Fold Change			Genes	P-value	Fold Change			Genes	P-value	Fold Change		
		28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz
MAP2K1	0.0004	1.38	-1.68	-1.22	*ITPKB*	0.0009	-1.68	-1.15	-1.93	*UNC119*	0.0023	-1.12	-1.6	-1.8
MDFIC	0.0002	1.33	-1.65	-1.25	*FLNA*	0.0007	-1.18	-1.41	-1.67	*HTATSF1*	0.0001	1.47	-2.03	-1.38
MESDC1	0.0002	1.38	-1.68	-1.22	*HIVEP1*	0.0006	-1.49	-1.24	-1.84	*LTA*	0.0021	1.62	-2.11	-1.3
TTC7A	0.0011	-1.32	-1.25	-1.65	*KDELC1*	0.0006	1.12	-1.63	-1.45	*SNN*	0.0005	-1.03	-1.68	-1.73
INPP5F	0.0013	-1.51	-1.16	-1.75	*LOC102724745*	0.0036	-5.39	1.24	-4.34	*TFEC*	0.0054	1.98	-2.27	-1.15
SLC4A4	0.0063	1.65	-1.81	-1.1	*DENND4A*	0.0001	-1.17	-1.43	-1.67	*DCUN1D3*	0.0031	2.18	-2.35	-1.08
COL5A2	0.0006	1.35	-1.67	-1.24	*PDE4B*	0.0004	1.5	-1.86	-1.24	*ENTPD1*	0.0043	-1.22	-1.55	-1.89
LINC01518	0.0083	1.06	-1.5	-1.41	*SNX10*	0.0003	1.33	-1.77	-1.33	*FGFR1*	0.0004	-1.51	-1.37	-2.07
TRIP10	0.0004	1.17	-1.57	-1.34	*ZNF827*	0.0034	-1.48	-1.25	-1.85	*TAGAP*	0.0018	-1.18	-1.58	-1.86
EIF4G3	0.0000	1.51	-1.75	-1.17	*PPID*	0.0000	1.83	-2.01	-1.1	*BCL2A1*	0.0018	1.22	-1.9	-1.56
ADO	0.0013	-1.23	-1.31	-1.61	*DOCK5*	0.0002	-1.65	-1.18	-1.95	*EPB41L4B*	0.0020	-1.24	-1.54	-1.92
MICAL2	0.0017	1.12	-1.54	-1.38	*IL2*	0.0051	1.14	-1.67	-1.46	*FDX1*	0.0002	-1	-1.73	-1.73
OAS3	0.0008	-1.23	-1.31	-1.61	*MAPK8*	0.0046	1.33	-1.79	-1.34	*GOLGA8Q*	0.0010	1.79	-2.22	-1.24
RALB	0.0000	1.31	-1.66	-1.27	*PRAMEF9*	0.0023	-1.18	-1.44	-1.69	*TNFAIP3*	0.0001	-1.52	-1.37	-2.09
RIMKLB	0.0042	-1.37	-1.24	-1.69	*PDE4A*	0.0050	1.09	-1.64	-1.5	*AHR*	0.0000	1.38	-2.01	-1.45
C4orf32	0.0030	1.13	-1.56	-1.37	*CETN4P*	0.0088	-1.91	-1.08	-2.06	*LGALS9B*	0.0009	-2.37	-1.03	-2.44
CSNK1G3	0.0002	-1.14	-1.37	-1.56	*IGLV3-21*	0.0011	-1.02	-1.56	-1.59	*NCALD*	0.0030	-1.33	-1.49	-1.99
GPATCH4	0.0000	1.33	-1.68	-1.26	*FOXP1*	0.0005	-1.33	-1.35	-1.8	*SPRY1*	0.0008	1.49	-2.08	-1.4
PIGV	0.0022	1.12	-1.55	-1.39	*CSF2RB*	0.0044	1	-1.58	-1.58	*TRAF1*	0.0002	-2.44	-1.01	-2.47
CXCR4	0.0020	1.11	-1.55	-1.4	*ANK2*	0.0001	1.49	-1.89	-1.27	*FGF2*	0.0003	1.18	-1.89	-1.6
IQGAP3	0.0071	1.21	-1.61	-1.34	*SORT1*	0.0058	1.14	-1.68	-1.48	*SOCS2*	0.0030	1.98	-2.33	-1.17
PLEKHO1	0.0024	-1.16	-1.37	-1.58	*NTRK2*	0.0018	1.12	-1.68	-1.5	*LINC00599*	0.0046	1.04	-1.79	-1.73
SUPT4H1	0.0022	-1.06	-1.43	-1.52	*LOC105375670*	0.0017	1.49	-1.9	-1.28	*TNIP1*	0.0006	-1.22	-1.59	-1.93
PRPSAP2	0.0011	1.66	-1.85	-1.11	*NCR2*	0.0001	-1.24	-1.42	-1.76	*SPIN1*	0.0000	1.38	-2.04	-1.48
NFAT5	0.0006	-1.1	-1.41	-1.55	*RAB8B*	0.0004	-1.01	-1.58	-1.6	*NCR3*	0.0019	1.52	-2.13	-1.4
PTPN6	0.0010	-1.18	-1.36	-1.6	*APOBEC3H*	0.0088	-1.05	-1.56	-1.64	*SHC4*	0.0022	1.87	-2.3	-1.23
SLC7A14	0.0039	1.15	-1.58	-1.38	*SYPL1*	0.0003	-1.05	-1.56	-1.64	*EMP1*	0.0014	1.9	-2.31	-1.22
STARD4	0.0005	1.41	-1.73	-1.23	*USP44*	0.0004	1.99	-2.13	-1.07	*MMD*	0.0001	1.13	-1.88	-1.66
LZTS1	0.0005	1.58	-1.82	-1.15	*LOC105371281*	0.0076	1.05	-1.64	-1.57	*TEX30*	0.0004	1.13	-1.88	-1.67
RBPJ	0.0000	-1.14	-1.39	-1.59	*PFDN2*	0.0000	1.63	-1.99	-1.22	*BATF3*	0.0005	2.06	-2.41	-1.17
B3GALNT1	0.0027	1.58	-1.83	-1.16	*TRAV24*	0.0005	-1.35	-1.37	-1.84	*CREM*	0.0000	2.01	-2.39	-1.19
GOLGA8N	0.0008	1.6	-1.84	-1.15	*FILIP1L*	0.0019	1.13	-1.71	-1.51	*GJB6*	0.0018	1.54	-2.17	-1.41
NCF2	0.0060	-1.96	-1.01	-1.98	*PTGER2*	0.0029	1.74	-2.04	-1.18	*PBLD*	0.0062	-1.02	-1.78	-1.81
CASP10	0.0022	1.17	-1.61	-1.38	*SEC61A2*	0.0008	-1.3	-1.4	-1.82	*RAB11FIP1*	0.0000	1.62	-2.22	-1.37
CYFIP1	0.0044	-1.03	-1.47	-1.52	*TRAK2*	0.0019	1.44	-1.9	-1.32	*BCL2*	0.0000	2.17	-2.46	-1.14
LOC339192	0.0043	-1.3	-1.3	-1.69	*NAB2*	0.0028	-1.14	-1.51	-1.73	*DENND5A*	0.0000	-1.62	-1.37	-2.23
RILPL2	0.0000	-1.04	-1.47	-1.53	*MINA*	0.0001	1.95	-2.15	-1.1	*NEK6*	0.0032	1.15	-1.93	-1.68
ZFHX3	0.0061	-1.25	-1.33	-1.67	*PHLDA1*	0.0030	1.42	-1.91	-1.34	*FLNB*	0.0004	-1.47	-1.46	-2.15
GOT1	0.0014	1.83	-1.95	-1.06	*ETS2*	0.0008	1.16	-1.76	-1.51	*LYST*	0.0001	-1.64	-1.37	-2.24
LOC105377022	0.0037	-1.69	-1.12	-1.89	*TRAF4*	0.0037	-1.34	-1.4	-1.88	*LOC105373211*	0.0022	-2.38	-1.07	-2.55
EPB41L2	0.0026	-1.54	-1.19	-1.83	*CASS4*	0.0005	-1.73	-1.2	-2.08	*ENPP6*	0.0028	1.96	-2.4	-1.23
AGK	0.0004	-1.1	-1.44	-1.58	*SLAMF1*	0.0002	1.69	-2.06	-1.22	*KAT2B*	0.0002	2.23	-2.51	-1.12
DSTYK	0.0017	1.43	-1.78	-1.24	*ITPR1*	0.0000	1.15	-1.76	-1.53	*SH2D2A*	0.0001	1.1	-1.9	-1.73
IGKC	0.0004	-1.49	-1.21	-1.81	*POU2F2*	0.0073	1.1	-1.72	-1.57	*TNFRSF11A*	0.0040	1.65	-2.26	-1.37
ETV4	0.0007	1.65	-1.89	-1.14	*GATA3*	0.0001	-1.43	-1.36	-1.95	*BHLHE40*	0.0001	-1.11	-1.73	-1.91
TLE4	0.0001	-1.66	-1.14	-1.89	*MOB3B*	0.0016	1.98	-2.2	-1.11	*PTPN14*	0.0002	2.27	-2.53	-1.11
ASB2	0.0051	-1.74	-1.1	-1.93	*ADPRH*	0.0067	-1.09	-1.59	-1.73	*RHEBL1*	0.0016	2.11	-2.47	-1.17
GNPTAB	0.0000	1.52	-1.83	-1.2	*IRF4*	0.0002	1.21	-1.82	-1.5	*CTTNBP2NL*	0.0009	-2.31	-1.1	-2.55
MBNL2	0.0029	1.5	-1.82	-1.21	*PLEKHA1*	0.0010	-1.52	-1.32	-2	*ENOX1*	0.0087	-1.88	-1.27	-2.38
NT5E	0.0038	-1.9	-1.05	-1.98	*APBB2*	0.0001	1.62	-2.06	-1.27	*SASH1*	0.0012	1.44	-2.15	-1.5
ASXL2	0.0009	1.15	-1.62	-1.41	*CD44*	0.0002	-1.11	-1.58	-1.75	*C10orf128*	0.0012	2.28	-2.54	-1.11
LRIG1	0.0000	-1.25	-1.35	-1.68	*GNAO1*	0.0045	1.15	-1.78	-1.55	*DAPK1*	0.0040	-1.38	-1.56	-2.14
PORCN	0.0001	1.31	-1.72	-1.31	*MIR4737*	0.0034	1.31	-1.89	-1.44	*IER5*	0.0032	1.14	-1.97	-1.74
CISH	0.0002	5.76	-4.36	1.32	*ARNTL2*	0.0004	1.01	-1.68	-1.66	*LAYN*	0.0001	-1.11	-1.76	-1.95
PRRT3	0.0060	-1.74	-1.11	-1.93	*BCL2L1*	0.0022	1.23	-1.84	-1.5	*STAP1*	0.0000	-1.67	-1.39	-2.32
LOC101927952	0.0094	1.05	-1.56	-1.48	*DPYSL2*	0.0072	1.14	-1.78	-1.56	*SNX9*	0.0004	-1.19	-1.7	-2.02
MAP4K2	0.0001	1.08	-1.58	-1.46	*NFE2L1*	0.0000	1.79	-2.15	-1.2	*SESN3*	0.0003	-1.98	-1.25	-2.47
LOC101927497	0.0066	1.62	-1.89	-1.16	*PIP5K1B*	0.0017	1.34	-1.92	-1.43	*DUSP5*	0.0009	1.42	-2.19	-1.54
ZNF704	0.0004	1.1	-1.6	-1.45	*RNVU1-3*	0.0016	1.72	-2.12	-1.23	*FSCN1*	0.0010	-1.83	-1.32	-2.41
CCL4L2	0.0023	1.69	-1.92	-1.14	*VCL*	0.0009	-1.18	-1.54	-1.82	*PSPH*	0.0009	2.7	-2.73	-1.01
POC1B	0.0042	1.71	-1.93	-1.13	*AHI1*	0.0001	-1.56	-1.31	-2.06	*EGR2*	0.0065	-1.8	-1.34	-2.41
CES4A	0.0011	1.35	-1.76	-1.3	*DFNA5*	0.0074	1.64	-2.09	-1.28	*LRRN3*	0.0001	-1.25	-1.67	-2.08
IL9R	0.0013	-1.37	-1.29	-1.77	*IKZF4*	0.0040	1.67	-2.11	-1.26	*RNF19B*	0.0005	-1.34	-1.6	-2.15
WEE2	0.0005	-1.12	-1.44	-1.62	*TMEM2*	0.0003	1.24	-1.87	-1.51	*ZG16B*	0.0000	-1.64	-1.42	-2.33
ERCC6	0.0007	-2.02	-1.02	-2.05	*IKZF2*	0.0000	-2.35	-1.01	-2.38	*HVCN1*	0.0021	-1.31	-1.63	-2.13
PRKD2	0.0016	1.16	-1.65	-1.42	*CAPG*	0.0008	-1.02	-1.69	-1.71	*KIF3A*	0.0000	1.68	-2.35	-1.41
PKD1L3	0.0005	1.36	-1.77	-1.3	*GNG4*	0.0020	-2.38	-1.01	-2.39	*TBC1D4*	0.0000	1.54	-2.28	-1.48
WWC3	0.0005	-1.42	-1.27	-1.8	*MIB1*	0.0000	1.57	-2.08	-1.32	*SFT2D1*	0.0047	1.16	-2.03	-1.75

Genes	P-value	Fold Change			Genes	P-value	Fold Change		
		28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz			28z vs BB-z	28-ΔIL2RB-z (YXXQ) vs 28z	28-ΔIL2RB-z (YXXQ) vs BBz
CTSH	0.0028	1.25	-2.1	-1.68	*NR4A2*	0.0001	-1.29	-2.05	-2.66
SMOX	0.0069	1.85	-2.45	-1.33	*NHS*	0.0000	-1.38	-2	-2.75
IVNS1ABP	0.0005	2.5	-2.71	-1.08	*ZDHHC14*	0.0001	-1.54	-1.88	-2.89
LOC105372832	0.0035	-2.17	-1.2	-2.59	*CD82*	0.0008	-2.04	-1.57	-3.2
APBA1	0.0062	2.13	-2.59	-1.21	*ACTN1*	0.0007	1.31	-2.76	-2.11
LOC102725065	0.0021	-2.16	-1.21	-2.61	*SOGA3*	0.0022	1.54	-3.02	-1.96
CABLES1	0.0003	-1.86	-1.34	-2.48	*KIAA1147*	0.0000	-1.14	-2.34	-2.68
LOC105370775	0.0016	-2.68	-1.04	-2.79	*MB21D2*	0.0000	2.36	-3.55	-1.5
NETO2	0.0014	1.91	-2.51	-1.32	*MIR146A*	0.0057	-1.44	-2.08	-2.99
TRIB1	0.0001	-1.21	-1.75	-2.11	*LOC100129034*	0.0011	1.19	-2.76	-2.33
ANXA3	0.0005	2.11	-2.62	-1.24	*STX3*	0.0004	3.84	-4.04	-1.05
FOXP3	0.0020	1.8	-2.49	-1.38	*TLR5*	0.0001	-7.36	1.17	-6.29
SH2B3	0.0001	1.55	-2.36	-1.52	*LOC105376626*	0.0022	-2.01	-1.71	-3.44
NDFIP2	0.0002	1.81	-2.5	-1.38	*NELL2*	0.0000	-3.09	-1.26	-3.9
SUSD4	0.0025	-2.74	-1.04	-2.84	*CCL3L3*	0.0001	2.21	-3.56	-1.61
OSM	0.0028	2.78	-2.86	-1.03	*PLCH1*	0.0026	2.14	-3.52	-1.65
CDK6	0.0000	1.63	-2.43	-1.49	*NFKBIA*	0.0001	-2.09	-1.69	-3.53
PTGIS	0.0004	2.44	-2.78	-1.14	*CEACAM1*	0.0006	2.58	-3.86	-1.5
CD109	0.0042	1.84	-2.57	-1.39	*BIRC3*	0.0001	-2.19	-1.68	-3.68
KIT	0.0007	-1.66	-1.49	-2.47	*RDH10*	0.0000	1.24	-2.97	-2.4
RASGRP3	0.0001	-2.58	-1.11	-2.85	*MIR3142*	0.0010	-1.89	-1.89	-3.58
TTN	0.0000	-2.6	-1.1	-2.86	*MYO1E*	0.0000	1.5	-3.28	-2.19
IRF8	0.0035	1.56	-2.42	-1.55	*EGFL6*	0.0001	2.81	-4.06	-1.45
ARHGAP10	0.0001	-2.81	-1.05	-2.94	*TNFRSF9*	0.0041	1.08	-2.88	-2.68
MYO3B	0.0013	2.01	-2.66	-1.33	*CCR2*	0.0087	1.22	-3.06	-2.51
YES1	0.0002	2.39	-2.83	-1.18	*TNFSF14*	0.0000	1.41	-3.27	-2.32
PLPP1	0.0000	1.33	-2.3	-1.73	*CSF2*	0.0011	1.03	-2.87	-2.8
HMSD	0.0003	-2.06	-1.32	-2.72	*CXorf21*	0.0000	-3.24	-1.34	-4.35
NRP2	0.0012	1.23	-2.23	-1.81	*LOC105370177*	0.0007	1.46	-3.38	-2.31
CD68	0.0003	1.94	-2.67	-1.38	*HHLA2*	0.0000	3.43	-4.44	-1.3
CDCP1	0.0003	1.39	-2.35	-1.7	*XCL1*	0.0005	1.79	-3.7	-2.07
SOX4	0.0000	-2.44	-1.18	-2.88	*HBEGF*	0.0000	4.67	-4.77	-1.02
KCNJ13	0.0007	-2.84	-1.06	-3	*DUSP10*	0.0000	-1.62	-2.24	-3.63
IL23A	0.0045	1.06	-2.09	-1.98	*IL5*	0.0002	2.65	-4.36	-1.65
ZBTB32	0.0003	2.47	-2.9	-1.18	*ULBP1*	0.0003	3.97	-4.8	-1.21
UNQ6494	0.0008	-1.18	-1.89	-2.23	*HSPA4L*	0.0004	3.16	-4.58	-1.45
WHAMMP3	0.0014	-2.43	-1.2	-2.92	*SDC4*	0.0000	1.16	-3.28	-2.82
TIGIT	0.0019	1.31	-2.34	-1.79	*LOC105374264*	0.0015	1.15	-3.31	-2.87
SLC9A7	0.0000	1.21	-2.27	-1.88	*ARHGAP31*	0.0016	-1.48	-2.56	-3.79
MLLT4	0.0016	1.86	-2.72	-1.46	*CRIM1*	0.0001	2.77	-4.69	-1.69
WARS	0.0002	1.86	-2.72	-1.46	*ABTB2*	0.0047	1.41	-3.75	-2.66
LINC01160	0.0007	-1.13	-1.99	-2.24	*CHRNA6*	0.0001	-10.93	1.39	-7.87
RAB9A	0.0004	-1.83	-1.5	-2.74	*CD83*	0.0002	-1.24	-2.89	-3.6
AFAP1L2	0.0019	1.33	-2.43	-1.82	*DUSP6*	0.0003	2.86	-4.86	-1.7
CD70	0.0008	1.19	-2.31	-1.94	*PDE7B*	0.0002	-3.22	-1.57	-5.06
SLC35F3	0.0001	2.43	-3.01	-1.24	*NFKB2*	0.0002	-1.98	-2.29	-4.53
CLIC4	0.0003	2.16	-2.92	-1.36	*CD80*	0.0000	2.6	-5.22	-2.01
CDC42BPA	0.0000	1.6	-2.64	-1.65	*CCL22*	0.0046	-1.13	-3.54	-3.99
BCL2L15	0.0096	-1.63	-1.63	-2.67	*MIR155HG*	0.0001	1.89	-5.06	-2.68
CCND2	0.0000	1.73	-2.73	-1.58	*VCAM1*	0.0000	-5.9	-1.12	-6.62
TIAM2	0.0021	-1.1	-2.06	-2.27	*LINC00892*	0.0000	2.16	-5.63	-2.6
SPRED2	0.0004	1.3	-2.47	-1.9	*TREML2*	0.0002	4.6	-6.77	-1.47
CCDC141	0.0000	-2.24	-1.36	-3.05	*DHRS3*	0.0001	-1.11	-3.96	-4.38
MYO1B	0.0002	2.9	-3.29	-1.13	*TNFSF4*	0.0002	-2.68	-2.45	-6.57
OLAH	0.0040	2.75	-3.24	-1.18	*CCR8*	0.0003	-3.25	-2.42	-7.88
NR4A3	0.0041	-1.32	-1.91	-2.52	*IER3*	0.0000	1.02	-5.73	-5.64
TP63	0.0000	-3.4	-1.02	-3.45	*CD40LG*	0.0001	3.09	-8.9	-2.88
RGS1	0.0009	-3.19	-1.07	-3.42	*DNAJC5B*	0.0000	-8.02	-1.31	-10.48
RGS16	0.0003	1.56	-2.74	-1.76	*IL1A*	0.0025	5.3	-10.15	-1.92
DUSP4	0.0002	-1.62	-1.73	-2.8	*DNAJC12*	0.0000	5.97	-10.94	-1.83
LOC728084	0.0001	2.19	-3.11	-1.42	*LIF*	0.0001	5.06	-11.58	-2.29
NFE2L3	0.0006	-1.31	-1.98	-2.59	*HNF1B*	0.0006	1.89	-10.11	-5.34
IL13	0.0001	2.42	-3.26	-1.35	*XCL2*	0.0001	-1.11	-7.44	-8.3
PTPRK	0.0031	1.29	-2.6	-2.01	*CCL1*	0.0000	-6.62	-2.13	-14.1
MYBL1	0.0002	1.93	-3.04	-1.57	*SLC26A4*	0.0001	9.57	-18.66	-1.95
HLA-DQA2	0.0024	-2.98	-1.16	-3.46					
CCL4	0.0004	2.1	-3.14	-1.5					
SERPINE2	0.0001	2.08	-3.18	-1.53					

Supplementary Table 3. Information for the NALM-6-bearing mice treated with CAR-T cells.

	CAR gene Infusion dose	Overall survival (days after leukemia infusion)	Cause of death	Signs of GVHD
1	28-z One infusion	49	Leukemia	None
2		46	Leukemia	None
3		36	Leukemia	None
4		39	Leukemia	None
5		35	Leukemia	None
6		32	Leukemia	None
1	BB-z One infusion	59	Leukemia	None
2		42	Leukemia	None
3		39	Leukemia	None
4		41	Leukemia	None
5		90 (Alive)	NA	None
6		61	Leukemia	None
1	28-ΔIL2RB-z (YXXQ) One infusion	90 (Alive)	NA	None
2		90 (Alive)	NA	Fur loss and red skin
3		90 (Alive)	NA	None
4		90 (Alive)	NA	None
5		90 (Alive)	NA	None
6		90 (Alive)	NA	None
1	28-z Two infusions	84	Leukemia	None
2		90 (Alive)	NA	None
3		75	GVHD	Weight loss (> 20%)
4		54	GVHD	Weight loss (> 20%)
5		90 (Alive)	NA	None
6		61	Leukemia	None
1	BB-z Two infusions	90 (Alive)	NA	None
2		72	Leukemia	None
3		85	GVHD	Fur loss, red skin and weight loss (> 20%)
4		90 (Alive)	NA	None
5		90 (Alive)	NA	None
6		90 (Alive)	NA	None
1	28-ΔIL2RB-z (YXXQ) Two infusions	90 (Alive)	NA	Fur loss and red skin
2		88	GVHD	Weight loss (> 20%)
3		90 (Alive)	NA	Weight loss (> 10%)
4		90 (Alive)	NA	None
5		90 (Alive)	NA	None
6		90 (Alive)	NA	None