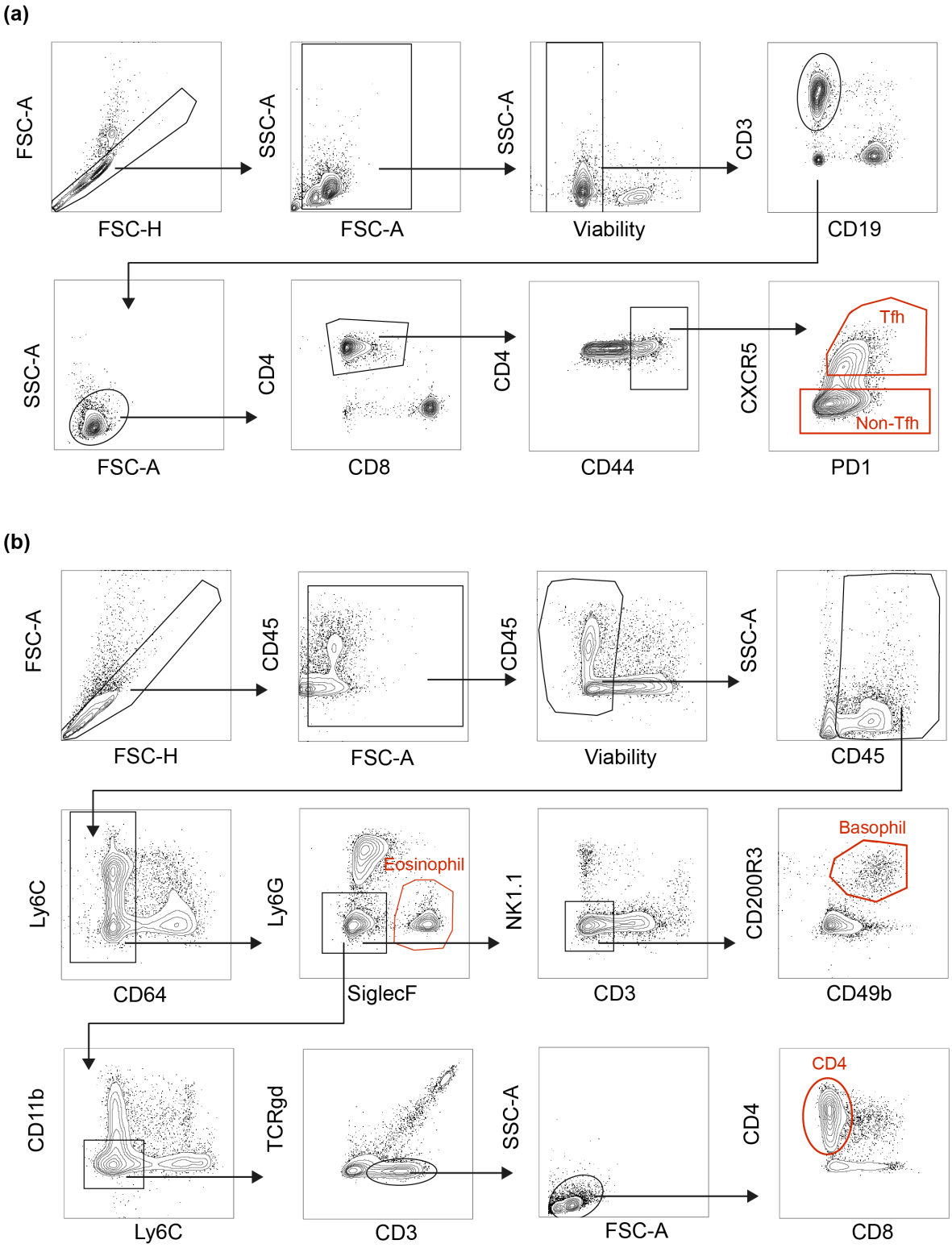
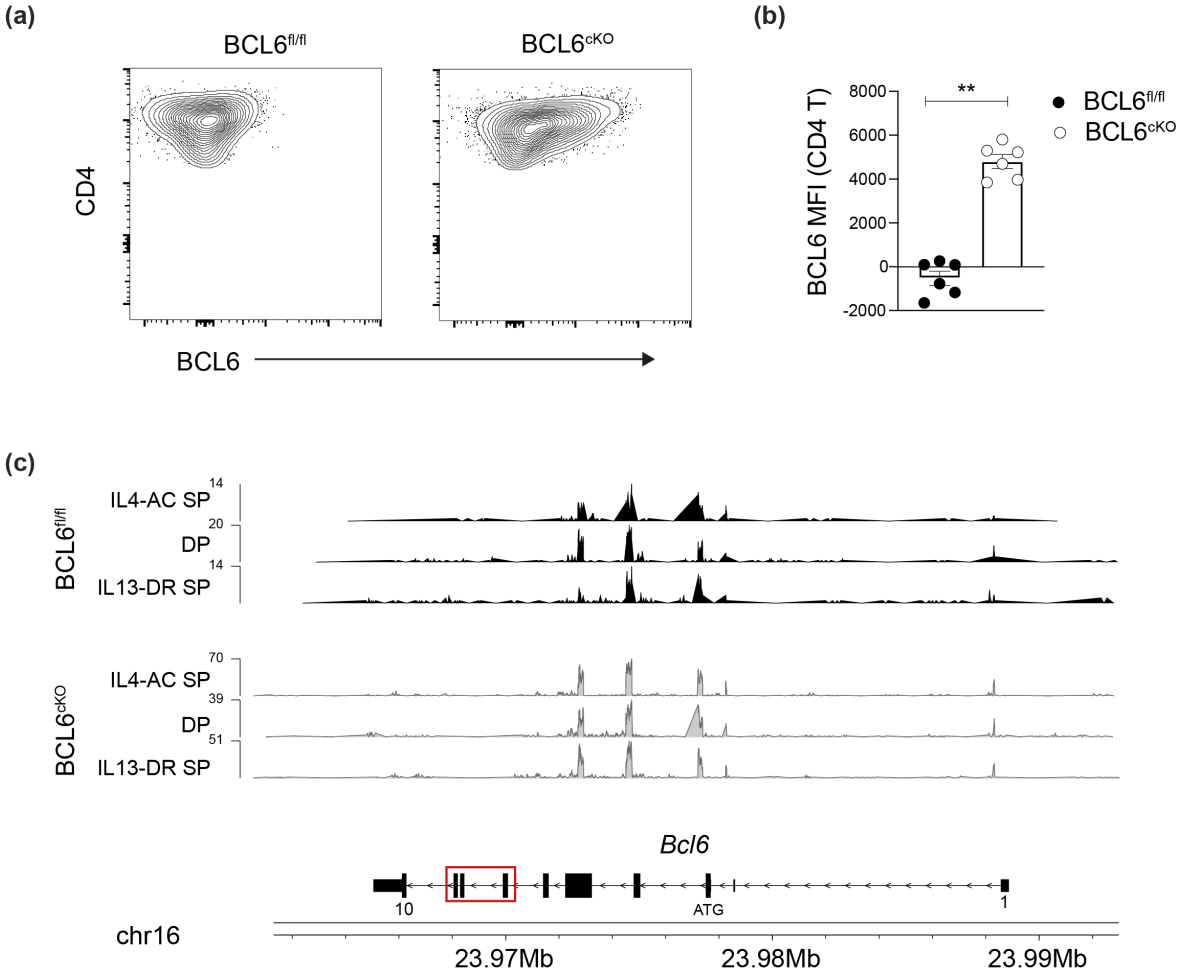
SUPPLEMENTARY FILES



Supplementary figure 1. Gating strategies for dLN and tissue

(**a**) Gating strategy for non-Tfh and Tfh cells in the aLN/medLN. (**b**) Gating strategy for CD4 T cells, eosinophils and basophils in the skin/lung tissue.



Supplementary figure 2. Truncated *Bcl6* transcription is enhanced in BCL6 deficient CD4 T cells and can accurately fold into a detectable but non-functional BCL6 protein

BCL6$^{fl/fl}$.4C13R and BCL6^{cKO}.4C13R mice were sensitised with 200µg HDM in the ear pinna. Tissues were collected for analysis on day seven. MFI of BCL6 was quantified by flow cytometry and depicted as flow plots (**a**) and bar graphs (**b**). Black circles represent BCL6$^{fl/fl}$, white circles represent BCL6^{cKO} samples. Data are shown as means ± SEM for six ears/group. *P <0.05, **P < 0.01, ***P <0.001. P-values were determined using a Mann Whitney test. (**c**) Karyoplot [45] visualisation of Illumina RNA-seq reads aligned to *Bcl6* (chromosome 16) mouse mm10. One representative replicate is shown from each Th2eff cell type (IL4-AC SP, IL4-AC.IL13-DR DP, IL13-DR SP) from each mouse strain (BCL6$^{fl/fl}$.4C13R or BCL6^{cKO}.4C13R). Linearly scaled peaks indicate the number of reads that were aligned to the *Bcl6* region, and the maximum peak for each sample is noted. *Bcl6* exons (1-10) are denoted by black rectangles, non-coding exons are half the height of coding exons. Exons 7-9 are highlighted in a red box as these are conditionally knocked out in BCL6^{cKO}.4C13R mice.

Supplementary table 1. IL4-AC SP: BCL6$^{fl/fl}$ vs BCL6^{cKO} DEGs

	Bcl6^{cKO} mean VSTpk	Bcl6$^{fl/fl}$ mean VSTpk	log_2.FC	adj.P.val
Ikzf2	4.538594148	6.429188181	2.02837597	6.65E-08
Cxcr3	5.490793629	7.058148914	1.74112149	3.40E-09
Hmox1	4.961308735	6.227166254	1.6713963	0.00607236
Sdcbp2	4.989556617	6.119169149	1.57972118	3.35E-06
Gpm6b	5.293469332	6.635412918	1.41561988	3.35E-06
Lta	4.548031364	5.45002811	1.4061896	4.64E-04
Osbpl3	3.667394685	4.565043762	1.35228866	3.23E-04
Rora	4.225265069	5.401087542	1.29635865	3.23E-07
Ikzf3	6.241749892	7.553969427	1.28862553	4.27E-04
Syt11	5.458888159	6.654420903	1.27279106	2.15E-14
Plcxd2	3.491879799	4.327243135	1.25669576	9.52E-04
March6	4.422272962	5.368245868	1.17783372	1.14E-04
Cpd	4.172311453	5.137882306	1.17578019	2.69E-04
Map6	4.481229675	5.386082045	1.13253104	7.20E-05
Odc1	6.070586707	7.095902179	1.0818816	1.05E-05
Slamf1	4.593133059	5.401831712	1.06725909	0.00812322
Arnt2	4.199867369	4.933422875	1.00693877	0.00962322
Pde3b	4.78980172	5.660019321	1.00183577	0.00554782
Ldhd	4.463887073	3.289169576	-2.1337158	2.37E-04
Bcl6	5.755743654	4.277222217	-1.8910635	4.19E-12
Cd7	9.655539791	7.834497382	-1.7937667	1.00E-16
1500009L16Rik	6.605276089	5.073285303	-1.7891626	4.54E-13
Cdh1	5.728518611	4.269282921	-1.7123668	0.00405351
Pdlim4	6.403071504	5.149834715	-1.598035	1.17E-08
Itgb7	9.985879075	8.406530946	-1.5703048	0.00432046
Gzmb	11.91541261	10.40222466	-1.5420258	1.43E-15
Lgals7	7.922205599	6.566934945	-1.4231933	1.97E-15
Cnr2	5.099260012	4.119742661	-1.3747554	0.00765384
Prag1	5.479321786	4.417393999	-1.3706185	5.12E-04
Ssbp4	5.990665955	5.022648019	-1.2441665	0.00655666
Spef2	5.01470046	4.072168682	-1.2183634	2.95E-04
Adgrg3	6.39815747	5.310969446	-1.2139461	8.88E-06
Nfil3	7.433056729	6.286228774	-1.2124561	5.41E-04
Treml2	4.831499009	4.028349031	-1.1125861	0.00174207
Il13	5.591928856	4.85588377	-1.0851218	0.00373676
Fbxo17	6.155516271	5.269330283	-1.0827504	0.00405351
Tmem30a	8.094755516	7.00716848	-1.0738293	0.00588076
Bmp7	6.518227459	5.508836728	-1.0692953	2.95E-04
Neb	6.688701703	5.619748782	-1.0412144	4.54E-11
Klhl9	6.36244065	5.401727746	-1.0367274	3.80E-05
Tmem64	7.931654736	6.903254796	-1.0179979	1.65E-04

Supplementary table 2. IL4-AC.IL13-DR DP: BCL6$^{fl/fl}$ vs BCL6^{cKO} DEGs

	Bcl6^{cKO} mean VSTpk	Bcl6$^{fl/fl}$ mean VSTpk	log$_2$.FC	adj.P.val
Plcxd2	3.176390131	4.114314478	1.5440217	1.63E-04
Cxcr3	5.351239144	6.499314631	1.37675689	4.18E-05
9430015G10Rik	4.429777095	5.368981207	1.31890268	4.60E-04
Zfp408	3.965389436	4.799708008	1.24829662	0.00500805
Nek8	4.484673689	5.382169138	1.21366171	0.00159408
Tmem131l	3.520339078	4.234123267	1.20670407	0.00394954
Map6	4.573268286	5.568272078	1.17850731	3.31E-05
Syt11	5.599574014	6.711886734	1.15287907	2.87E-11
Slc37a2	4.388683721	5.248346467	1.08165252	0.00637263
B3galt4	4.685973	5.409974673	1.04005512	0.0052219
Ltb	7.476682199	8.554013046	1.0368087	4.02E-10
Pecam1	4.92645538	5.663746325	1.02419123	0.00663904
Cd209e	4.877146481	4.18843513	-3.8869496	0.00419504
Il3	3.570851111	2.775920944	-2.8435634	1.57E-06
Bcl6	4.617077623	3.803141993	-2.2188647	1.82E-15
Rbm47	5.093070585	4.373012677	-1.8453675	3.39E-04
Klrc2	5.660874599	4.895977024	-1.7884738	0.00120263
Ccl1	11.60933846	10.55068026	-1.7027752	0.00433502
Yipf4	3.906588294	3.120043598	-1.5232113	0.00735611
Tmem30a	5.886239029	5.00832699	-1.3681042	9.99E-05
Rab28	4.971037861	4.242497676	-1.362732	0.00952638
Klrc1	4.709634736	3.97299377	-1.3471154	2.46E-04
Ms4a6d	5.535732574	4.582476295	-1.3322279	0.00149124
Cpm	5.05684646	4.142783105	-1.2893106	1.88E-07
Cd7	5.273892214	4.279547965	-1.2461977	4.02E-10
Zfp825	7.005175641	5.912875293	-1.2408851	0.00965928
Klhl9	5.341077507	4.355804565	-1.2049444	1.88E-06
Atp2c1	5.708554989	4.690670228	-1.2039898	0.00163208
Zfp281	6.312963578	5.20944391	-1.1973264	1.03E-04
Marcks	4.631435913	3.79388342	-1.1868585	1.37E-04
Zfyve16	6.076925444	4.954528121	-1.1831642	1.63E-04
Serpinb6b	5.173218454	4.412933002	-1.1515427	4.87E-05
Mgat5	7.176194944	6.040202589	-1.1433494	8.25E-05
Itga2	6.657262433	5.430718495	-1.1404695	0.00297297
Ppp3ca	5.641478329	4.696275602	-1.137295	1.63E-04
Bclaf3	6.510947825	5.395048232	-1.1295334	0.00504538
Dcun1d5	4.939592466	4.080674573	-1.1237072	0.00929168
Hhex	7.910158511	6.526110861	-1.0856778	7.39E-04
Zfp738	5.432031289	4.405763804	-1.0808106	0.00160365
Gzmb	7.839046697	6.089102906	-1.0791569	3.79E-07
Tex30	4.860429691	3.832804944	-1.0752647	3.70E-04
Bmp7	4.697514339	3.523656149	-1.0456948	0.00301338
Rreb1	5.662253732	4.035906049	-1.0220611	7.19E-04
D1Ertd622e	8.744998746	5.965394965	-1.0114027	1.63E-04
Ube2q2	5.104110584	3.441929618	-1.0012106	0.0079353

Supplementary table 3. IL13-DR SP: BCL6$^{fl/fl}$ vs BCL6^{cKO} DEGs

	Bcl6^{cKO} mean VSTpk	Bcl6$^{fl/fl}$ mean VSTpk	log_2.FC	adj.P.val
Bcl2	3.89037404	5.07382953	1.53544418	4.51E-06
Tspoap1	4.67892513	6.07785049	1.35605336	8.68E-04
Cdc7	5.19327491	6.19858943	1.14053167	1.31E-04
Zbtb11	4.84438071	5.7238568	1.01698343	5.64E-05
Cd209e	5.37795991	4.59013895	-4.3661429	0.00223076
Il3	5.94047567	5.11857799	-3.0182059	1.85E-07
Bcl6	6.46249647	5.42395019	-2.4707679	1.00E-16
Fcgrt	6.97463201	5.93492185	-1.7799645	0.002843
Cd200	4.98745566	4.12806178	-1.6709018	0.00401491
Bmp7	6.34277439	5.4424478	-1.4981876	5.33E-05
Bach2	4.51101573	3.78192488	-1.4841517	2.89E-09
Ttyh3	6.83852114	5.6950356	-1.4610644	0.00853229
Zfyve16	8.65776843	7.38750915	-1.38215	6.04E-05
Cd7	11.2606127	9.98921815	-1.310766	1.37E-11
Agpat4	9.08253648	7.75166253	-1.3052596	1.85E-10
Il10	6.59804099	5.46617211	-1.2936382	5.95E-04
Gzmb	7.32037824	6.09864555	-1.2820867	2.36E-10
Tnfsf8	4.71156771	3.75429583	-1.2638753	8.16E-08
1500009L16Rik	4.39975727	3.58814166	-1.2304816	5.24E-07
Scml4	4.86628403	3.73945819	-1.1990371	0.00230127
Rhoc	4.75918295	3.84127784	-1.1048647	1.85E-06
Il6st	6.49931619	5.09632968	-1.0752299	1.02E-04
Cpm	5.15774004	4.17535637	-1.0548435	2.63E-05
Lpp	5.92161192	4.03843238	-1.0335857	2.35E-11
Lgmn	8.53018297	5.76282985	-1.0270463	9.89E-05
Dglucy	5.47363699	3.41148665	-1.0162188	5.31E-04