

Supplementary Table 5. Differentially expressed genes identified by NanoString (2F8 model), significantly differentially expressed

Gene symbol	mean_IgG	mean_PDL1	mean_Cis	mean_CisP	p_value_limma	q_value_limma
Msln	7.727725168	5.152901202	7.158239157	8.224625692	5.0578E-05	0.0232
Tpsab1	5.26291376	9.106569969	6.372764078	4.22104263	6.18653E-05	0.0232
Fpr2	5.589866751	9.849850334	7.454197823	7.081802126	0.000152284	0.0381
Il1b	5.097043221	9.06724461	7.21166925	5.251641788	0.0002102	0.0394
Cd207	4.98137702	7.165268371	7.154542048	5.641202511	0.000337568	0.0401
Gbp2b	4.184945152	9.237186319	7.318723033	5.203820804	0.000452638	0.0401
Il7r	5.706396248	8.543381998	7.184415129	6.280416655	0.000567547	0.0401
Ltb	4.804127263	7.599853042	6.823322557	5.544059117	0.000705302	0.0401
Cd79b	4.728274944	7.545028128	5.749926705	5.073390364	0.000727765	0.0401
Card9	4.049803057	6.618879247	5.865629522	4.692155931	0.000779904	0.0401
Cr2	3.894828984	6.7204319	5.368854313	4.118394731	0.000784102	0.0401
Sell	5.882944711	8.378864964	7.479475802	6.426756932	0.000802681	0.0401
Tnfsf10	4.968264887	7.519513553	7.086951935	5.64149864	0.000816926	0.0401
Cd4	5.028516912	7.487423336	6.105709975	5.319503449	0.000899819	0.0401
Sh2d1b1	5.58319053	7.773843542	6.925867358	5.237308494	0.000913138	0.0401
Cma1	5.955190723	8.898702527	7.67740778	5.54613077	0.000957226	0.0401
H2-Ob	6.207908381	8.26650848	7.509227723	6.092625693	0.001042614	0.0401
Ncr1	5.141953285	7.897973004	6.462125387	5.265771076	0.001075153	0.0401
Hck	5.817854643	8.454912926	7.31167443	6.887845865	0.001076175	0.0401
Icos	5.021272145	8.130520881	7.157241607	5.894973987	0.001090928	0.0401
Mefv	5.335548515	7.405685666	6.263627664	5.066888704	0.001122959	0.0401
Irak2	6.343714617	8.268515217	7.554989345	6.310155622	0.001428314	0.0430
Pycard	4.928963693	7.35956135	6.123199115	5.575072358	0.001432414	0.0430
Btla	5.002920107	7.215504503	6.454859757	5.255992043	0.001471103	0.0430
Havcr2	5.014910051	7.835247181	7.003883013	5.228718171	0.001487685	0.0430
Ly9	6.022604135	7.986068835	7.024602936	6.566348678	0.001532829	0.0430
Ms4a1	5.497028487	7.501534262	6.68516123	4.919044369	0.001568769	0.0430
Cd40	5.215998159	7.434720175	7.041056162	5.190985843	0.00160694	0.0430
Snai1	4.874760008	6.691575912	6.185913468	4.319121985	0.001730938	0.0443
Ebi3	4.676839783	7.275499231	5.946269995	5.678088087	0.001854627	0.0443

Oasl1	4.394430963	6.705331232	6.100236681	4.322288588	0.001985911	0.0443
Cmah	5.269412562	7.379836116	6.626174652	5.888290249	0.001996175	0.0443
Tnfsf13b	3.872963274	6.782442596	5.760015254	4.50814059	0.002026388	0.0443
Tnfrsf14	5.40723552	7.946467122	6.712920171	6.08285171	0.002036464	0.0443
Il7	4.960796249	6.75701869	6.202212181	4.953792655	0.002072689	0.0443
Il16	5.880210622	7.836884308	6.82493833	6.389828517	0.002204631	0.0443
F13a1	12.71289785	10.09748378	11.07110569	13.12743413	0.002244852	0.0443
Il21r	5.735953854	8.171409334	6.561546352	6.004370111	0.00236077	0.0443
Cd274	5.586087524	8.849533027	6.939658433	6.638129034	0.002363896	0.0443
Irf4	4.986045037	7.142642857	6.4553041	5.272476399	0.002417792	0.0443
Ifi44l	6.077851438	8.854331968	6.398109612	6.817604249	0.002424037	0.0443
Icam2	5.313504562	7.428204265	6.287376266	5.248173744	0.00250798	0.0446
Tnf	4.581185778	7.247732889	6.330433465	5.135992063	0.002556503	0.0446
Nlrp3	6.003777441	8.204452542	7.117549702	6.819080946	0.00261824	0.0446
Pparg	5.590592985	7.504188262	6.519074783	5.055510039	0.002702483	0.0450
Cd22	5.255351415	7.586066784	6.093686891	6.021667532	0.002903771	0.0460
Gzmb	4.094387367	6.826471931	5.924624416	4.136557826	0.00305253	0.0460
Tirap	4.990543258	7.112887435	5.970077605	5.186055716	0.00318853	0.0460
Usp18	5.373641639	7.908889624	6.847989418	5.690829031	0.003225971	0.0460
Xcr1	5.351995341	7.663843343	7.063378578	5.213129329	0.003270042	0.0460
Tnfaip3	6.217669631	7.754516041	7.085402128	6.045246196	0.00329875	0.0460
Cxcl10	6.116392847	9.564056768	7.505679283	6.916438726	0.003449374	0.0460
Oas2	6.141766144	8.81205919	7.709182009	7.027833838	0.003460698	0.0460
Traf3	6.60909252	8.107848969	7.531312719	6.652730412	0.003473455	0.0460
Slc11a1	5.629132407	8.378848516	7.421895907	6.965693529	0.003502241	0.0460
Zbp1	6.337252209	9.806631026	8.213236297	8.272040958	0.003563443	0.0460
Socs3	5.551659702	7.251038654	6.841666916	6.065021527	0.003672943	0.0460
Cd3eap	5.02831854	7.029939204	6.113891725	5.135992063	0.003708657	0.0460
Spn	5.559400454	7.993700484	6.071939118	6.060155622	0.003767208	0.0460
Prg2	5.294931724	8.819457037	7.178517049	6.269115833	0.003807383	0.0460
Selplg	6.941118822	8.822833927	8.032083908	7.961219154	0.003831225	0.0460
Rrad	5.862714712	7.583733384	7.355515055	5.690306845	0.003835399	0.0460
Ikzf1	5.926178553	8.297203034	7.265353932	6.975672716	0.003860054	0.0460
Ccr12	5.304890218	7.06954645	6.090888744	4.884602182	0.004057612	0.0476

Il12b	4.257752977	7.366550255	6.541629416	5.216621271	0.004159946	0.0476
Xaf1	7.282411017	9.799597264	8.702921445	8.654409124	0.004188885	0.0476
Pdcd1lg2	5.47575274	7.599785178	7.040393119	4.984863239	0.004344893	0.0486
Ctsg	4.105055855	6.137247033	5.673891348	3.786801231	0.004441432	0.0488
Rag1	4.431459715	5.930738562	5.825898344	3.574802005	0.004506352	0.0488
Tfeb	4.505627174	7.038686641	5.92104701	4.859369955	0.004554717	0.0488
Card11	4.732840202	7.14147099	5.968229179	4.228479466	0.005156499	0.0542
Ccnd3	6.293771333	8.367012546	7.573453933	6.327536729	0.005252808	0.0542
Klrc2	5.536058288	8.191417487	7.272980848	5.67349423	0.005284145	0.0542
Il25	5.050553679	7.681405478	6.101860284	4.293419284	0.005411182	0.0542
Bcl2	5.827068924	7.551883614	7.054952612	6.045528259	0.005415667	0.0542
Adora2a	4.678854777	6.715634221	6.094637095	4.567400389	0.005593633	0.0547
Tmem173	4.936641701	7.313579953	6.322233256	6.395373738	0.00561707	0.0547
Il4	3.698299215	6.703793339	5.697874628	3.934153333	0.006104618	0.0575
Stat4	4.921060453	7.892238344	6.578470195	6.007763413	0.006208712	0.0575
Isg15	6.093874683	9.040225906	7.971111492	7.244589451	0.006221002	0.0575
Mpped1	3.830129631	6.234333037	5.708820833	2.532320754	0.006277572	0.0575
Tap1	6.39931867	8.761954319	7.641882385	7.438283818	0.006509034	0.0575
Rorc	3.710587586	6.686748047	5.811629602	4.011290599	0.006513411	0.0575
Il11	4.47868971	6.274498701	6.047051396	3.808142706	0.006611605	0.0575
Il6	5.574818777	7.152052254	6.46078813	5.405198143	0.006709621	0.0575
Cmpk2	6.142705857	7.975014451	7.644779229	6.086379906	0.006711711	0.0575
Csf2rb	7.081503147	9.00960524	8.015771664	7.850130629	0.006737399	0.0575
Mx2	5.191800413	7.412575778	6.105709975	4.757461994	0.006744787	0.0575
Ifi44	7.231503945	10.4686698	8.225649409	8.974314031	0.00722403	0.0596
Trp53	6.83058176	8.238141284	8.226600113	7.080881318	0.007286277	0.0596
Sigirr	4.752319109	7.040091842	6.696348125	4.922523371	0.007307894	0.0596
Slamf7	4.068303202	7.659589595	5.875212502	5.94196155	0.007346118	0.0596
Cxcr6	5.833992591	8.362043491	6.949343309	7.169177389	0.007495057	0.0596
H2-Dma	5.542774648	8.02780256	6.964533092	5.726233612	0.007561669	0.0596
Cd7	5.240242818	7.367516159	6.524179135	5.179265133	0.007580459	0.0596
Cd96	4.946623247	7.073045652	6.28996902	4.75734877	0.007626993	0.0596
Bst2	8.049879364	9.999445221	9.910981236	9.113376656	0.0078104	0.0604
Ccr3	4.467265907	7.211467775	5.854550206	4.29106961	0.008301323	0.0626

Stat1	7.603793233	10.6248178	9.04462162	8.880681104	0.008423198	0.0626
Cxcr5	4.218294934	6.474024146	5.400427199	3.58223884	0.008494982	0.0626
Cxcr4	6.542721602	8.135583731	7.331031982	6.98214116	0.008518181	0.0626
Tlr9	6.37372131	8.778780655	7.669249319	7.567093206	0.008601917	0.0626
Cxcl1	3.878555227	5.628138825	6.076260373	4.594154299	0.00860297	0.0626
Il2rg	4.189015273	6.308723174	5.427611683	4.353671309	0.008984775	0.0642
Psemb9	7.28664038	9.964065665	9.072006839	8.430946616	0.0090235	0.0642
Zap70	3.679204865	6.606267331	5.610485234	4.495258015	0.009077228	0.0642
Fadd	4.853406982	6.706210243	6.037354246	4.518992505	0.009152705	0.0642
Tnfrsf13c	2.922062577	5.52437945	4.935784974	3.739751438	0.009412395	0.0651
Xcl1	4.985193099	7.784511154	6.958038951	6.3559019	0.009463205	0.0651
Cd19	4.329935668	6.73739043	5.259085105	4.145123532	0.009642918	0.0657
Ido1	4.938095162	6.49338318	5.900313623	4.0770492	0.009882249	0.0667
Nfatc2	4.325813638	6.408914739	5.688836564	4.941907105	0.010057707	0.0667
Ddx60	6.636647471	8.953927657	7.790502711	7.302531436	0.010124044	0.0667
Cd2	4.573080408	6.730476211	6.096153528	4.207430684	0.010241718	0.0667
Cdh5	6.321689069	7.766969242	7.292979746	6.430009804	0.010256184	0.0667
Pax5	5.257914533	6.599396897	6.087464371	4.650493464	0.010310222	0.0667
Fcer1a	6.050024695	7.351723776	7.194608531	5.024795853	0.010469065	0.0671
Cd8b1	4.731411789	7.128066487	6.378933638	5.233504767	0.010835686	0.0689
Cd8a	4.98137702	7.362029955	6.122701898	6.124250158	0.01111488	0.0692
Irf7	5.548148457	7.883845114	7.038575021	5.712885224	0.011134457	0.0692
Il1rn	4.918251338	7.621393622	6.647838327	6.375556447	0.01119557	0.0692
Gata3	4.400750815	6.731585786	5.488224457	4.239751438	0.011371272	0.0692
Ccl21a	6.855850736	8.829154402	8.036408778	6.077171691	0.011379728	0.0692
Klra15	3.946809851	5.600538072	4.807354922	3.528781238	0.011446922	0.0692
Tnfrsf13b	4.747506596	6.643176444	6.125951482	5.031968362	0.011706251	0.0702
Nod1	6.272635431	7.829614623	7.464819503	5.932415143	0.012460726	0.0742
C1ra	6.77754755	8.40921116	7.675317821	6.842264533	0.01261327	0.0743
Mapk11	4.337536246	6.261220586	5.883235088	4.354609343	0.012685415	0.0743
Epsti1	3.04248125	4.768361501	5.121970766	2.773189285	0.013143971	0.0762
Ctsw	6.019751382	8.389900385	6.849379019	6.657571476	0.013298484	0.0762
Cd3g	5.293393667	7.696128146	7.192606267	6.587193653	0.01334149	0.0762
Cxcl9	7.819265143	12.43863734	8.500496675	9.923866581	0.013402446	0.0762

Ccl24	4.602542439	6.637946893	5.59164715	4.655284028	0.013601464	0.0766
Cd5	3.925813683	6.770156164	5.599152962	4.655284028	0.013688571	0.0766
Cd69	5.884950864	8.31508954	6.570822182	6.019309061	0.01380729	0.0767
Irak3	6.714720962	8.156691536	7.303580023	6.469738609	0.013983049	0.0771
Ikzf2	6.739553211	8.040899975	7.793447562	6.843916365	0.014134281	0.0774
Ccl22	5.161430438	7.082433185	6.326776425	4.811016616	0.014400304	0.0776
Saa1	4.784287815	7.514829761	6.302343826	4.349836172	0.014472015	0.0776
Csf3r	6.04828989	8.134223419	6.821208715	6.433385178	0.014486332	0.0776
H2-DMb2	4.834178938	7.120262588	6.267162447	5.516517041	0.014842668	0.0782
Gzmm	3.525821952	6.169501509	5.300791705	3.367283255	0.014941516	0.0782
Ifna1	6.015663457	8.945216692	7.559239881	5.448705493	0.015014017	0.0782
Cd80	6.073032375	7.887941859	6.912419082	6.585473517	0.015043803	0.0782
H2-K1	8.540730431	10.65849425	10.12413117	9.922132293	0.015163851	0.0782
C6	5.782515681	7.67830218	7.126823173	5.652549853	0.01524587	0.0782
Il17f	3.986040746	6.926815122	5.938244218	3.611899965	0.015382319	0.0782
Cd79a	4.008398767	6.003672758	5.123108234	3.268577185	0.015431824	0.0782
Cd180	7.540247059	10.06521884	8.542224966	9.013390799	0.015901301	0.0796
Cx3cr1	7.864977905	9.662493077	8.451158392	10.10810213	0.015916887	0.0796
Foxj1	4.466179539	6.330220515	5.966755134	3.558666942	0.016188451	0.0801
Fos	7.254793328	8.490585219	8.19583459	7.064424855	0.016241806	0.0801
Pou2af1	4.482776708	6.861043682	6.070299867	4.516588004	0.016413715	0.0805
Runx3	4.561981878	6.759202968	5.728911096	4.513672275	0.016822462	0.0819
Icosl	6.10267779	8.409731565	7.094925179	7.129461552	0.017402188	0.0836
Serpinb2	6.050053438	7.644485924	7.031158962	6.454172462	0.017587451	0.0836
Tlr6	6.605602375	8.297908572	6.669478487	7.217096165	0.01765436	0.0836
Pou2f2	5.626772507	8.34287447	6.177380939	6.677054354	0.017849321	0.0836
Icam1	5.941873161	7.350674673	6.85599464	5.789699567	0.018033806	0.0836
Mmp9	4.987795562	6.747251867	5.500591666	4.76499585	0.018046016	0.0836
Irgm2	6.660850934	8.971796737	7.83354881	7.054634897	0.01806867	0.0836
Notch1	6.421607673	8.095839676	7.327488615	6.490047027	0.01816794	0.0836
Klra2	7.4950709	10.35177498	8.915149107	9.000492287	0.018197074	0.0836
Vwf	5.498235967	7.231274664	6.722010216	6.143683602	0.018342871	0.0836
Ifitm1	6.342856095	8.211818039	7.211053994	6.392263702	0.018531821	0.0836
Mnx1	3.928561379	6.049960277	4.85324519	3.549918086	0.018586372	0.0836

Ccl19	5.581029201	8.208643833	6.963772652	5.05237762	0.018635729	0.0836
Erbp2	5.587503391	7.184274944	7.054120608	5.62511821	0.018749964	0.0836
Il2rb	6.896401837	9.205600701	7.733182182	7.511810974	0.018827573	0.0836
Slamf1	4.182604266	6.927885658	5.609676322	4.768937679	0.019033705	0.0836
Ccr5	7.718140299	10.00461198	9.053899774	9.439170104	0.019113349	0.0836
Itgb3	4.57290285	6.426531142	6.186653191	4.640560606	0.019164216	0.0836
Hcst	5.72137606	7.591533978	6.793957476	6.291766471	0.019512906	0.0844
Dpp4	6.238622568	7.731474627	7.504668047	6.134188009	0.019647991	0.0844
Entpd1	6.823342126	8.287167941	7.794818313	7.272006959	0.019699528	0.0844
C8b	5.434903955	6.567362134	5.672979692	4.559990516	0.01979726	0.0844
Arg2	4.645160334	6.26757119	5.672523215	3.766480239	0.019931045	0.0845
Fut7	4.72364968	6.863545861	5.513083235	4.393677944	0.020237207	0.0853
Fcgr1	7.558132494	9.57129307	8.087948473	8.851260634	0.020533105	0.0856
Tnfrsf17	3.755591953	6.227791484	5.521998186	3.780302429	0.020534087	0.0856
Gfi1	6.274691978	7.42971406	6.471776384	5.648194549	0.020893313	0.0861
Csf2	4.079070383	6.105693798	5.337206793	4.092399337	0.02089734	0.0861
Nt5e	6.45750074	7.501217483	6.432568143	5.960529741	0.021058002	0.0861
Igll1	3.923698289	6.368343389	5.590565263	3.88804719	0.021192423	0.0861
Tapbp	6.213710582	7.374726427	7.623092766	6.609544151	0.021344458	0.0861
Psmb10	5.737372174	7.971308793	7.341421948	6.780516307	0.021361709	0.0861
Ccl5	5.456899252	8.169774017	6.491044983	6.402549853	0.02151743	0.0863
Cdh1	5.672286648	6.654304309	7.704400498	5.025719473	0.02165709	0.0864
C2	6.379177849	8.067392437	7.503140914	6.746979063	0.021998647	0.0867
Ccl28	3.883332433	5.496372418	4.543801483	3.245926548	0.022139424	0.0867
Timd4	4.954682988	7.034491958	6.276342988	5.034040014	0.022255855	0.0867
Relb	7.187921881	8.604363429	9.001901774	7.018205784	0.022391538	0.0867
C1s1	8.52038943	9.823252178	9.216127881	8.300369704	0.022407289	0.0867
Il5ra	4.312796626	6.373995221	5.695703526	4.362802778	0.022426988	0.0867
Siglec1	5.666661543	7.731828247	7.024792231	6.571232846	0.022799633	0.0877
Cxcl11	6.142010597	8.486595729	7.636058359	6.394905614	0.023125843	0.0885
Ccr4	4.241806565	6.529926531	5.944741376	4.414817811	0.023418417	0.0892
Batf	5.662996128	7.474981889	6.159373934	6.118711668	0.023703156	0.0898
Cd55	6.011821092	7.13415355	6.764938265	5.706402361	0.023945985	0.0902
Klrc1	6.466821193	9.005627352	7.592838912	7.351904624	0.024509017	0.0915

Masp2	4.323080408	6.251934424	6.031922623	3.603671309	0.024518321	0.0915
Lta	4.897478608	6.718939751	6.00218905	4.457430684	0.024728836	0.0918
Lcp1	9.273144511	11.39447395	10.04164063	10.39973276	0.025239397	0.0932
Nfatc4	4.907978988	6.653524933	5.956131518	4.987579168	0.025512925	0.0936
Mst1r	4.253436983	6.255928247	5.893583657	4.314641508	0.025595244	0.0936
Tnfsf15	4.378555227	6.602094487	6.020400802	4.972368564	0.026862048	0.0971
Clec7a	6.826249024	9.552204714	8.277922532	7.864895879	0.02693214	0.0971
Stat2	6.429851801	7.941609805	7.599142671	6.743270179	0.027056497	0.0971
Cxcl14	8.404113051	9.807784557	9.370916676	8.352164349	0.027095137	0.0971
Irf8	6.7230639	8.329673621	7.699352597	7.562648341	0.027228808	0.0971
Lck	5.17270241	6.982976609	6.422480934	5.456573499	0.027305339	0.0971
Ccr2	8.761686568	11.61643254	9.591193138	9.450551098	0.027438166	0.0971
Elane	5.015300602	6.878590448	5.965381054	4.392226539	0.027931155	0.0983
Ikbke	5.702512666	7.299140542	6.713553349	6.002479018	0.028461759	0.0997
Klrg1	4.938930538	6.997517711	6.064001261	4.399760276	0.028567059	0.0997