DZ and LZ genes differentially expressed in IgG1 GC cells - Related to

DZ or LZ	LZ/DZ log fold change	FDR	symbol	DEFINITION
DZ	-2.203604507	2.88E-05	**Mnd1**	meiotic nuclear divisions 1 homol
DZ	-1.609238814	0.002572445	**Ccnb1**	cyclin B1 (Ccnb1)
DZ	-1.597847426	0.019678474	**Otub2**	OTU domain, ubiquitin aldehyde
DZ	-1.56572213	0.002284179	**5830416P10Rik**	PREDICTED: RIKEN cDNA 5830
DZ	-1.50468615	0.005448177	**Anxa2**	annexin A2 (Anxa2)
DZ	-1.430855074	6.03E-06	**8430410A17Rik**	RIKEN cDNA 8430410A17 gene
DZ	-1.39081389	0.002059733	**Plk1**	polo-like kinase 1 (Drosophila) (F
DZ	-1.367055839	0.001331313	**Nek2**	NIMA (never in mitosis gene a)-re
DZ	-1.338205686	3.41E-05	**Cenpf**	centromere protein F (Cenpf)
DZ	-1.311037392	0.002444609	**Myl4**	myosin, light polypeptide 4 (Myl4
DZ	-1.288862109	0.007010221	**Hmmr**	hyaluronan mediated motility rec
DZ	-1.282828063	0.000117382	**Aspm**	asp (abnormal spindle)-like, micr
DZ	-1.27174668	0.001741681	**Adhfe1**	alcohol dehydrogenase, iron con
DZ	-1.231900898	0.001471693	**Cdca8**	cell division cycle associated 8 (C
DZ	-1.228282089	0.003475031	**Kif2c**	kinesin family member 2C (Kif2c)
DZ	-1.207978293	0.001448152	**Ccnb2**	cyclin B2 (Ccnb2)
DZ	-1.188901109	0.003433154	**Cdc25b**	cell division cycle 25 homolog B (
DZ	-1.17758589	0.001576268	**Cdc20**	cell division cycle 20 homolog (S
DZ	-1.177129208	0.003087238	**Mcoln2**	mucolipin 2 (Mcoln2), transcript v
DZ	-1.169775915	0.023613939	**Cdc25c**	cell division cycle 25 homolog C (
DZ	-1.153387075	0.000231836	**Lig4**	ligase IV, DNA, ATP-dependent (
DZ	-1.146979411	0.015523712	**Cenpa**	centromere protein A (Cenpa)
DZ	-1.127470493	0.006970275	**Mctp2**	multiple C2 domains, transmemb
DZ	-1.123166314	0.000101016	**Tgfbr1**	transforming growth factor, beta r
DZ	-1.117186921	0.023873714	**Uprt**	uracil phosphoribosyltransferase
DZ	-1.110667698	0.000222929	**Mprip**	myosin phosphatase Rho interac
DZ	-1.088072797	0.006913379	**4930547N16Rik**	RIKEN cDNA 4930547N16 gene
DZ	-1.080089478	0.00301952	**Ube2c**	ubiquitin-conjugating enzyme E2(
DZ	-1.07736667	0.020938687	**Gclc**	glutamate-cysteine ligase, catalyt
DZ	-1.07642595	0.039770185	**Cenpv**	centromere protein V
DZ	-1.065294596	0.000746092	**D2Ertd750e**	DNA segment, Chr 2, ERATO Do
DZ	-1.052459748	0.019824401	**Cdkn3**	PREDICTED: cyclin-dependent k
DZ	-1.049156927	0.003000722	**Blvrb**	biliverdin reductase B (flavin redu
DZ	-1.037085501	0.014322674	**Gcnt3**	glucosaminyl (N-acetyl) transfera
DZ	-1.036378728	0.000117382	**Cmpk1**	cytidine monophosphate (UMP-C
DZ	-1.035305776	0.002059733	**Tbc1d4**	TBC1 domain family, member 4 (
DZ	-1.032591362	0.000396144	**Ccrl1**	chemokine (C-C motif) receptor-l
DZ	-1.023417878	0.007900884	**Sepp1**	selenoprotein P, plasma, 1 (Sepp
DZ	-1.018315447	0.001859467	**Hmgn5**	high-mobility group nucleosome l
DZ	-1.015034007	0.000436664	**2700094K13Rik**	RIKEN cDNA 2700094K13 gene
DZ	-1.013667611	0.000117382	**Cenpe**	centromere protein E (Cenpe)
DZ	-1.010048056	0.020695241	**Cd55**	CD55 antigen (Cd55)
DZ	-1.003949331	0.000736312	**Lgr5**	leucine rich repeat containing G p
DZ	-0.997573218	0.000222929	**Igj**	immunoglobulin joining chain (Igj
DZ	-0.991627938	0.001741681	**Cdca3**	cell division cycle associated 3 (C

DZ	-0.988504895	0.000880793	**Gcet2**	germinal center expressed transc
DZ	-0.988460196	6.77E-05	**Pafah1b3**	platelet-activating factor acetylhy
DZ	-0.988280398	0.027149934	**Kif18b**	kinesin family member 18B
DZ	-0.986414604	0.002640316	**Eif2ak3**	eukaryotic translation initiation fa
DZ	-0.980775577	0.001448152	**Scd2**	stearoyl-Coenzyme A desaturase
DZ	-0.978112082	0.004953469	**Racgap1**	Rac GTPase-activating protein 1
DZ	-0.976641064	0.008226512	**Sgol2**	shugoshin-like 2 (S. pombe) (Sgo
DZ	-0.968167964	0.011771345	**Nuf2**	NUF2, NDC80 kinetochore comp
DZ	-0.959399324	0.021674955	**Rala**	v-ral simian leukemia viral oncog
DZ	-0.958348108	5.64E-07	**Smarca4**	SWI/SNF related, matrix associat
DZ	-0.951851327	0.001090484	**BC017612**	cDNA sequence BC017612 (BC0
DZ	-0.951824349	0.000522068	**Polh**	polymerase (DNA directed), eta (
DZ	-0.928689853	0.015523712	**Prr11**	proline rich 11 (Prr11)
DZ	-0.924489975	0.006560834	**Pif1**	PIF1 5'-to-3' DNA helicase homol
DZ	-0.916201384	0.000263879	**Dap**	death-associated protein (Dap)
DZ	-0.907047354	0.022888622	**F630043A04Rik**	RIKEN cDNA F630043A04 gene
DZ	-0.89527306	0.001438889	**Tpx2**	TPX2, microtubule-associated pr
DZ	-0.887769646	0.009340799	**Ckap2**	cytoskeleton associated protein 2
DZ	-0.886010444	0.000160918	**Mtf2**	metal response element binding t
DZ	-0.885723039	0.036597067	**Rrm2b**	ribonucleotide reductase M2 B (T
DZ	-0.87677509	0.039622146	**Pttg1**	pituitary tumor-transforming 1 (Pt
DZ	-0.869107156	0.006006106	**Map3k15**	mitogen-activated protein kinase
DZ	-0.858421866	0.021068309	**Akt3**	thymoma viral proto-oncogene 3
DZ	-0.858381718	0.009340799	**Kif20a**	kinesin family member 20A (Kif20
DZ	-0.857924015	0.034343928	**9430016H08Rik**	PREDICTED: RIKEN cDNA 9430
DZ	-0.853171146	0.022888622	**Cks2**	CDC28 protein kinase regulatory
DZ	-0.85126704	0.045918552	**Heatr7b1**	HEAT repeat containing 7B1
DZ	-0.846773822	0.000533699	**Top1**	topoisomerase (DNA) I
DZ	-0.844452335	0.008800771	**Hdac8**	histone deacetylase 8 (Hdac8)
DZ	-0.843083503	0.033147966	**Tram2**	translocating chain-associating m
DZ	-0.841948376	0.013513413	**Ect2**	ect2 oncogene (Ect2)
DZ	-0.836997476	0.002444609	**1190002H23Rik**	RIKEN cDNA 1190002H23 gene
DZ	-0.822310983	0.000467493	**Ube2s**	ubiquitin-conjugating enzyme E2
DZ	-0.821810895	0.023404862	**Fads2**	fatty acid desaturase 2
DZ	-0.819317729	0.017040033	**Tacc3**	transforming, acidic coiled-coil co
DZ	-0.813764186	0.010398958	**Prps2**	phosphoribosyl pyrophosphate sy
DZ	-0.808680921	0.031451848	**Rps27l**	ribosomal protein S27-like (Rps2
DZ	-0.801608549	0.005678917	**Calm3**	calmodulin 3 (Calm3)
DZ	-0.794457945	0.019618915	**C330027C09Rik**	RIKEN cDNA C330027C09 gene
DZ	-0.792676962	0.000264944	**Tubb2c**	tubulin, beta 2c (Tubb2c)
DZ	-0.79254643	0.009340799	**Xkrx**	X Kell blood group precursor rela
DZ	-0.77401575	0.007408562	**Dhfr**	dihydrofolate reductase (Dhfr)
DZ	-0.77333314	0.017241961	**Kpna2**	karyopherin (importin) alpha 2 (K
DZ	-0.769320791	0.01676397	**4931429I11Rik**	RIKEN cDNA 4931429I11 gene (
DZ	-0.767949876	0.000467493	**Tcea1**	transcription elongation factor A (
DZ	-0.763337922	0.035523958	**Ube2h**	ubiquitin-conjugating enzyme E2
DZ	-0.759661338	0.00795155	**Sdhb**	succinate dehydrogenase comple
DZ	-0.758959827	0.000447976	**Neil1**	nei endonuclease VIII-like 1 (E. c
DZ	-0.754690858	0.027149934	**Ada**	adenosine deaminase (Ada)
DZ	-0.748141396	0.042163853	**Mrps18c**	mitochondrial ribosomal protein S

DZ	-0.747827203	0.01884947	**Efcab2**	EF-hand calcium binding domain
DZ	-0.745586384	0.024407772	**Depdc1b**	DEP domain containing 1B (Dep
DZ	-0.737889934	0.020695241	**Hdgf**	hepatoma-derived growth factor
DZ	-0.729188254	0.04166788	**Cks1b**	CDC28 protein kinase 1b (Cks1b
DZ	-0.727246415	0.005886711	**Dbf4**	DBF4 homolog (S. cerevisiae) (D
DZ	-0.723434243	0.000783835	**Cat**	catalase
DZ	-0.722400554	0.027180144	**Ly6g5b**	lymphocyte antigen 6 complex, lo
DZ	-0.720690939	0.001165052	**Eif2a**	eukaryotic translation initiation fa
DZ	-0.717404448	0.004200073	**Chchd10**	coiled-coil-helix-coiled-coil-helix c
DZ	-0.711957552	0.013513413	**Ccna2**	cyclin A2 (Ccna2)
DZ	-0.711341362	0.005667371	**Mrpl34**	mitochondrial ribosomal protein L
DZ	-0.71054188	0.003537007	**Dynlt3**	dynein light chain Tctex-type 3 (D
DZ	-0.710315344	0.007900884	**Cdkn2aipnl**	CDKN2A interacting protein N-ter
DZ	-0.703433573	0.030981264	**Akap12**	A kinase (PRKA) anchor protein
DZ	-0.703011709	0.01858635	**Mrp63**	mitochondrial ribosomal protein 6
DZ	-0.701535775	0.040173846	**Dcaf10**	DDB1 and CUL4 associated facto
DZ	-0.699801089	0.007163927	**Hspa2**	heat shock protein 2 (Hspa2), tra
DZ	-0.697351611	0.017865915	**Srp19**	signal recognition particle 19 (Srp
DZ	-0.691600537	0.037604739	**Ccdc18**	coiled-coil domain containing 18
DZ	-0.69023716	0.037698406	**Fundc1**	FUN14 domain containing 1 (Fur
DZ	-0.689364499	6.77E-05	**Gm600**	nuclear GTPase, germinal center
DZ	-0.689075442	0.01676397	**Lman1**	lectin, mannose-binding, 1 (Lman
DZ	-0.688002081	0.00125369	**Gpd1l**	glycerol-3-phosphate dehydroger
DZ	-0.684711292	0.033041543	**Bub1b**	BUB1 mitotic checkpoint serine/th
DZ	-0.684295423	0.020968728	**1500003O03Rik**	calcineurin-like EF hand protein 1
DZ	-0.683905204	0.026023521	**C79407**	expressed sequence C79407 (C7
DZ	-0.683597382	0.011308934	**Uqcr11**	ubiquinol-cytochrome c reductase
DZ	-0.681184566	0.047260288	**Ptgr1**	prostaglandin reductase 1 (Ptgr1
DZ	-0.674408585	0.037462462	**Npm3**	nucleoplasmin 3 (Npm3)
DZ	-0.673292913	0.015308018	**Grxcr1**	glutaredoxin, cysteine rich 1 (Grx
DZ	-0.671634374	0.022201911	**Glul**	glutamate-ammonia ligase (gluta
DZ	-0.671168951	0.002151014	**Anp32e**	acidic (leucine-rich) nuclear phos
DZ	-0.669056685	0.044545733	**Cep55**	centrosomal protein 55 (Cep55)
DZ	-0.668826527	0.016489489	**Ndufa8**	NADH dehydrogenase (ubiquinor
DZ	-0.66616224	0.003398496	**Rad21**	RAD21 homolog (S. pombe) (Ra
DZ	-0.665408953	0.01511501	**Ufc1**	ubiquitin-fold modifier conjugating
DZ	-0.664308256	0.017865915	**Cpsf2**	cleavage and polyadenylation sp
DZ	-0.662338747	0.006963424	**Helq**	helicase, POLQ-like
DZ	-0.661551563	0.013470867	**Ndufb9**	NADH dehydrogenase (ubiquinor
DZ	-0.655349548	0.028103955	**Ckap5**	cytoskeleton associated protein 5
DZ	-0.655285445	0.036132626	**Rasgrp2**	RAS, guanyl releasing protein 2
DZ	-0.654753222	0.001515462	**Dck**	deoxycytidine kinase (Dck)
DZ	-0.653198039	0.025790926	**Lmo7**	PREDICTED: LIM domain only 7
DZ	-0.650964559	0.003537007	**Hmgb2**	high mobility group box 2 (Hmgb2
DZ	-0.643392626	0.000231836	**Pola1**	polymerase (DNA directed), alph
DZ	-0.642290207	0.021125301	**Ndufs2**	NADH dehydrogenase (ubiquinor
DZ	-0.64087846	0.004899575	**Ccne2**	cyclin E2 (Ccne2), transcript varia
DZ	-0.63315769	0.004195118	**Psmc1**	protease (prosome, macropain) 2
DZ	-0.633098183	0.018369698	**Rbbp8**	retinoblastoma binding protein 8
DZ	-0.627317005	0.007136636	**Hist1h2bc**	histone cluster 1, H2bc (Hist1h2b

DZ	-0.625309795	0.022888622	**Gtf2h5**	general transcription factor IIH, p
DZ	-0.624755337	0.019212687	**Pcbp1**	poly(rC) binding protein 1 (Pcbp1
DZ	-0.619098165	0.049139825	**Fabp5**	fatty acid binding protein 5, epide
DZ	-0.618627426	0.010546338	**Glrx3**	glutaredoxin 3 (Glrx3)
DZ	-0.616634885	0.004865501	**2010001M09Rik**	RIKEN cDNA 2010001M09 gene
DZ	-0.615571925	0.04663501	**Asf1a**	ASF1 anti-silencing function 1 ho
DZ	-0.615197362	0.048624266	**Ctnnal1**	catenin (cadherin associated pro
DZ	-0.611918739	0.026782879	**Sft2d2**	SFT2 domain containing 2 (Sft2d
DZ	-0.610781813	0.00269664	**Mki67**	PREDICTED: antigen identified b
DZ	-0.609172267	0.035194049	**Gins1**	PREDICTED: GINS complex sub
DZ	-0.608401475	0.013470867	**Phf19**	PHD finger protein 19 (Phf19)
DZ	-0.606119484	0.042915043	**Acbd5**	acyl-Coenzyme A binding domair
DZ	-0.600204601	0.036354981	**Psat1**	phosphoserine aminotransferase
DZ	-0.59879749	0.023344955	**Usmg5**	upregulated during skeletal musc
DZ	-0.597115245	0.025180195	**Cerk**	ceramide kinase
DZ	-0.592524072	0.000646482	**Dynlt1a**	dynein light chain Tctex-type 1A
DZ	-0.592090549	0.037698406	**Bcl7a**	B-cell CLL/lymphoma 7A (Bcl7a)
DZ	-0.589935259	0.004626223	**Susd3**	sushi domain containing 3 (Susd
DZ	-0.58905628	0.022020705	**Uqcrfs1**	ubiquinol-cytochrome c reductas
DZ	-0.584299233	0.025962994	**Rbm38**	RNA binding motif protein 38 (Rb
DZ	-0.577043788	0.036597067	**Mtch2**	mitochondrial carrier homolog 2 (
DZ	-0.576429544	0.047797029	**D18Ertd653e**	DNA segment, Chr 18, ERATO D
DZ	-0.575408329	0.039426452	**Snx12**	sorting nexin 12
DZ	-0.574840216	0.003613503	**Ndufc2**	NADH dehydrogenase (ubiquinor
DZ	-0.573329965	0.005678917	**Abca3**	ATP-binding cassette, sub-family
DZ	-0.570427206	0.033147966	**Scarb2**	scavenger receptor class B, mem
DZ	-0.569807799	0.017241961	**Dut**	deoxyuridine triphosphatase (Dut
DZ	-0.564348971	0.041281664	**Ndufb6**	NADH dehydrogenase (ubiquinor
DZ	-0.559934017	0.025962994	**Dbi**	diazepam binding inhibitor (Dbi),
DZ	-0.559062081	0.00301952	**AI314180**	expressed sequence AI314180 (A
DZ	-0.555629179	0.047469736	**Ncapd2**	non-SMC condensin I complex, s
DZ	-0.554979435	0.025943469	**Psmd1**	proteasome (prosome, macropai
DZ	-0.554664709	0.036026112	**Txndc11**	thioredoxin domain containing 11
DZ	-0.550357865	0.025790926	**Dr1**	down-regulator of transcription 1
DZ	-0.54854536	0.010398958	**Bub3**	BUB3 mitotic checkpoint protein
DZ	-0.54807053	0.017854711	**Hp1bp3**	heterochromatin protein 1, bindin
DZ	-0.544095774	0.025105291	**Prdx1**	peroxiredoxin 1 (Prdx1)
DZ	-0.54273879	0.046410178	**Tex261**	testis expressed gene 261 (Tex2
DZ	-0.540347336	0.026837722	**Eif4a3**	eukaryotic translation initiation fa
DZ	-0.537805503	0.046279215	**Mars**	methionine-tRNA synthetase (Ma
DZ	-0.537271083	0.036597067	**Itgb3**	integrin beta 3 (Itgb3)
DZ	-0.53689048	0.037108439	**1110059E24Rik**	RIKEN cDNA 1110059E24 gene
DZ	-0.532353622	0.036132626	**Hsd17b4**	hydroxysteroid (17-beta) dehydro
DZ	-0.530055338	0.046301208	**Mns1**	meiosis-specific nuclear structura
DZ	-0.528420171	0.033128459	**Ndufa11**	PREDICTED: NADH dehydroger
DZ	-0.525745547	0.003572948	**Rere**	arginine glutamic acid dipeptide (
DZ	-0.523811271	0.031160758	**Lipc**	lipase, hepatic (Lipc)
DZ	-0.519012549	0.034281776	**Txn1**	thioredoxin 1 (Txn1)
DZ	-0.518967226	0.016171611	**Tcf3**	transcription factor 3 (Tcf3), trans
DZ	-0.51712692	0.01676397	**Zfp706**	zinc finger protein 706 (Zfp706)

DZ	-0.513636556	0.025790926	**Ccnd3**	cyclin D3 (Ccnd3), transcript vari
DZ	-0.510033823	0.018309911	**Atp5f1**	ATP synthase, H+ transporting, m
DZ	-0.506321492	0.028079559	**0610009D07Rik**	RIKEN cDNA 0610009D07 gene
DZ	-0.498602808	0.023873714	**Mcm6**	minichromosome maintenance d
DZ	-0.49271043	0.021149681	**Mbd2**	methyl-CpG binding domain prot
DZ	-0.492157831	0.036132626	**Scn11a**	sodium channel, voltage-gated, t
DZ	-0.491732419	0.025943469	**Slamf7**	SLAM family member 7 (Slamf7)
DZ	-0.491061132	0.048624266	**Ccdc21**	coiled-coil domain containing 21
DZ	-0.490590713	0.013513413	**Dazap1**	DAZ associated protein 1 (Dazap
DZ	-0.490203878	0.013513413	**Snrpf**	PREDICTED: small nuclear ribor
DZ	-0.489367359	0.014828841	**Ube2l3**	ubiquitin-conjugating enzyme E2
DZ	-0.488735888	0.022788629	**Lsm5**	LSM5 homolog, U6 small nuclear
DZ	-0.487348672	0.047724492	**Ubn1**	ubinuclein 1 (Ubn1)
DZ	-0.485851296	0.007136636	**Atpif1**	ATPase inhibitory factor 1 (Atpif1
DZ	-0.485127369	0.048624266	**Inppl1**	inositol polyphosphate phosphata
DZ	-0.484917798	0.022888622	**Ctse**	cathepsin E (Ctse)
DZ	-0.482279463	0.036132626	**Anapc5**	anaphase-promoting complex su
DZ	-0.480240429	0.022266024	**Qrsl1**	glutaminyl-tRNA synthase (glutar
DZ	-0.478295994	0.025813415	**Uhrf2**	ubiquitin-like, containing PHD an
DZ	-0.475459638	0.020662557	**Kif2a**	kinesin family member 2A (Kif2a)
DZ	-0.474314058	0.027890317	**Naa50**	N(alpha)-acetyltransferase 50, N
DZ	-0.473563219	0.031160758	**Rbm8a**	RNA binding motif protein 8a (Rb
DZ	-0.472898942	0.001892239	**Fam107b**	family with sequence similarity 10
DZ	-0.47067015	0.045470312	**Rnf183**	ring finger protein 183 (Rnf183)
DZ	-0.469478611	0.022888622	**Hist1h3e**	histone cluster 1, H3e (Hist1h3e)
DZ	-0.468730699	0.027459266	**Slc1a5**	solute carrier family 1 (neutral an
DZ	-0.46750324	0.004049029	**Phf3**	PHD finger protein 3
DZ	-0.464444996	0.047879065	**Hist1h3g**	histone cluster 1, H3g (Hist1h3g)
DZ	-0.464167594	0.012013575	**Tuba1a**	tubulin, alpha 1A (Tuba1a)
DZ	-0.463953254	0.048624266	**Hist1h4c**	histone cluster 1, H4c (Hist1h4c)
DZ	-0.455419193	0.022201911	**Ddx24**	DEAD (Asp-Glu-Ala-Asp) box pol
DZ	-0.454346474	0.03059244	**Cd24a**	CD24a antigen (Cd24a)
DZ	-0.452946193	0.025790926	**Top2b**	topoisomerase (DNA) II beta (Top
DZ	-0.44370501	0.019547937	**Man2a1**	mannosidase 2, alpha 1 (Man2a1
DZ	-0.440332817	0.023280158	**Atp5b**	ATP synthase, H+ transporting m
DZ	-0.43860784	0.025105291	**Fli1**	Friend leukemia integration 1 (Fli
DZ	-0.438591531	0.023270637	**Ran**	RAN, member RAS oncogene fa
DZ	-0.436592966	0.023579734	**Lrwd1**	leucine-rich repeats and WD repe
DZ	-0.431746544	0.017865915	**Reln**	reelin
DZ	-0.431228607	0.039877531	**Dnahc8**	dynein, axonemal, heavy chain 8
DZ	-0.428148909	0.047797029	**Atp5j**	ATP synthase, H+ transporting, m
DZ	-0.422094998	0.049927987	**Txnrd1**	thioredoxin reductase 1 (Txnrd1)
DZ	-0.41860553	0.00301952	**Rnf10**	ring finger protein 10 (Rnf10)
DZ	-0.418547503	0.037973867	**H2afz**	H2A histone family, member Z (H
DZ	-0.417363291	0.028316195	**Cox5b**	cytochrome c oxidase subunit Vb
DZ	-0.416275764	0.020627901	**Pou2af1**	POU domain, class 2, associating
DZ	-0.414427124	0.033147966	**Ctdsp2**	CTD (carboxy-terminal domain, R
DZ	-0.413131737	0.039770185	**Dnajc9**	DnaJ (Hsp40) homolog, subfamil
DZ	-0.411505258	0.026311697	**Ywhae**	tyrosine 3-monooxygenase/tryptc
DZ	-0.408495972	0.039368979	**Hsp90aa1**	heat shock protein 90, alpha (cyt

DZ	-0.402079475	0.048624266	**C1galt1**	core 1 synthase, glycoprotein-N-
DZ	-0.399057693	0.007163927	**Gm6682**	tubulin, alpha 1C pseudogene
DZ	-0.398701164	0.045371293	**Calm2**	calmodulin 2 (Calm2)
DZ	-0.394256702	0.01511501	**Dynlt1c**	dynein light chain Tctex-type 1C
DZ	-0.387738337	0.032966088	**Slc4a7**	solute carrier family 4, sodium bi
DZ	-0.384868907	0.037462462	**Myb**	myeloblastosis oncogene (Myb)
DZ	-0.384392486	0.039770185	**Pdcd6ip**	programmed cell death 6 interact
DZ	-0.383328099	0.022888622	**Hnrnpul1**	heterogeneous nuclear ribonucle
DZ	-0.378222382	0.046301208	**Vmn2r26**	vomeronasal 2, receptor 26 (Vmr
DZ	-0.372860443	0.016551882	**Lbr**	lamin B receptor
DZ	-0.370303181	0.022888622	**Maz**	MYC-associated zinc finger prote
DZ	-0.366161416	0.046279215	**2700029M09Rik**	PREDICTED: RIKEN cDNA 2700
DZ	-0.36371023	0.036132626	**Il17ra**	interleukin 17 receptor A (Il17ra)
DZ	-0.362098142	0.041204472	**Hspa4**	heat shock protein 4 (Hspa4)
DZ	-0.361439819	0.023825205	**Trim2**	tripartite motif-containing 2
DZ	-0.348418102	0.013778759	**Aars**	alanyl-tRNA synthetase (Aars)
DZ	-0.345684827	0.039990655	**Slc30a5**	solute carrier family 30 (zinc tran
DZ	-0.336415718	0.033283565	**Hcfc1**	host cell factor C1 (Hcfc1)
DZ	-0.328904067	0.036132626	**Hmgn2**	high mobility group nucleosomal
DZ	-0.319109034	0.036132626	**2610305D13Rik**	RIKEN cDNA 2610305D13 gene
DZ	-0.309626116	0.039622146	**St6gal1**	beta galactoside alpha 2,6 sialylt
DZ	-0.267662394	0.037604739	**Tram1**	translocating chain-associating m
LZ	0.27622868	0.045470312	**Cd180**	CD180 antigen (Cd180)
LZ	0.308278763	0.020212266	**Ptprc**	protein tyrosine phosphatase, rec
LZ	0.311549803	0.04442565	**BC061194**	cDNA sequence BC061194 (BC0
LZ	0.311829355	0.047469736	**Fchsd2**	FCH and double SH3 domains 2
LZ	0.322458282	0.006941271	**H2-DMb2**	histocompatibility 2, class II, locu
LZ	0.333354569	0.029418465	**Cd53**	CD53 antigen
LZ	0.342799749	0.049920184	**D030047H15Rik**	RIKEN cDNA D030047H15 gene
LZ	0.344065495	0.049447699	**Pfkfb4**	6-phosphofructo-2-kinase/fructos
LZ	0.345708572	0.003255349	**Tmem131**	transmembrane protein 131 (Tme
LZ	0.350189565	0.048805859	**Cnot6l**	CCR4-NOT transcription complex
LZ	0.360207923	0.023757217	**Dennd4a**	DENN/MADD domain containing
LZ	0.36358486	0.043322193	**Zfp608**	zinc finger protein 608 (Zfp608) X
LZ	0.372367942	0.03469783	**Parp12**	poly (ADP-ribose) polymerase fa
LZ	0.374499581	0.039770185	**Bmp2k**	BMP2 inducible kinase (Bmp2k)
LZ	0.375287986	0.021674955	**Olfr533**	olfactory receptor 533 (Olfr533)
LZ	0.384996781	0.047724492	**Gm8979**	very large inducible GTPase 1 ps
LZ	0.386672148	0.024519543	**Wdfy4**	WD repeat and FYVE domain co
LZ	0.388009912	0.027180144	**Mef2c**	myocyte enhancer factor 2C
LZ	0.388763662	0.039770185	**Mycbp2**	MYC binding protein 2 (Mycbp2)
LZ	0.39297546	0.046780285	**Ptpre**	protein tyrosine phosphatase, rec
LZ	0.402246782	0.04900198	**Rbm26**	RNA binding motif protein 26 (Rb
LZ	0.409979433	0.00602517	**Ppl**	periplakin (Ppl)
LZ	0.410876833	0.036698875	**Amica1**	adhesion molecule, interacts with
LZ	0.411540316	0.008007695	**Rel**	reticuloendotheliosis oncogene (I
LZ	0.412026911	0.025790926	**Snx5**	sorting nexin 5 (Snx5) XM_0010(
LZ	0.418555832	0.017865915	**Mast4**	PREDICTED: microtubule associ
LZ	0.424024798	0.008769697	**Itpr2**	inositol 1,4,5-triphosphate recept
LZ	0.432218457	0.025790926	**Jmjd1c**	PREDICTED: jumonji domain co

LZ	0.433291747	0.042912505	**Tmf1**	TATA element modulatory factor
LZ	0.433595006	0.047797029	**Dbndd2**	dysbindin (dystrobrevin binding p
LZ	0.435193016	0.026166668	**Lrch1**	leucine-rich repeats and calponin
LZ	0.435938296	0.049596721	**Tank**	TRAF family member-associated
LZ	0.440947531	0.002645785	**Prkcb**	protein kinase C, beta
LZ	0.441921464	0.032935505	**Sdc4**	syndecan 4 (Sdc4)
LZ	0.444048068	0.019792546	**Arhgap17**	Rho GTPase activating protein 17
LZ	0.444201749	0.049774536	**Gabbr1**	gamma-aminobutyric acid (GABA
LZ	0.446071302	0.00847002	**Sp110**	Sp110 nuclear body protein
LZ	0.450616127	0.010546338	**Atp9b**	ATPase, class II, type 9B (Atp9b)
LZ	0.45245204	0.019632342	**Rasal3**	RAS protein activator like 3
LZ	0.453736338	0.010104911	**Cd52**	CD52 antigen
LZ	0.456678623	0.00301952	**Cd22**	CD22 antigen (Cd22), transcript v
LZ	0.462316715	0.014523211	**Lrba**	LPS-responsive beige-like ancho
LZ	0.463904017	0.048624266	**Mfsd3**	major facilitator superfamily doma
LZ	0.466198924	0.03375416	**Unc93b1**	unc-93 homolog B1 (C. elegans)
LZ	0.466340812	0.004264698	**Tmem123**	transmembrane protein 123 (Tme
LZ	0.477884455	0.036132626	**Zdhhc23**	zinc finger, DHHC domain contai
LZ	0.490951952	0.004449656	**Malat1**	metastasis associated lung aden
LZ	0.495641173	0.008169294	**Btg1**	B-cell translocation gene 1, anti-p
LZ	0.496117559	0.033720365	**Golgb1**	PREDICTED: golgi autoantigen,
LZ	0.496450391	0.047260288	**Ifnar1**	interferon (alpha and beta) recep
LZ	0.499392017	0.015063966	**Gripap1**	GRIP1 associated protein 1 (Grip
LZ	0.502836433	0.023579734	**Ctsa**	cathepsin A (Ctsa), transcript var
LZ	0.506757715	0.003741304	**Nfkb1**	nuclear factor of kappa light polyp
LZ	0.50740956	0.025750959	**Rnf157**	ring finger protein 157
LZ	0.510353747	0.037462462	**Phf15**	PHD finger protein 15 (Phf15)
LZ	0.512874893	0.01858635	**Pou2f2**	POU domain, class 2, transcriptio
LZ	0.513667307	0.008169294	**Epb4.1l2**	erythrocyte protein band 4.1-like
LZ	0.514829136	0.039368979	**Tgif1**	TGFB-induced factor homeobox
LZ	0.515601355	0.00817569	**Myo9b**	myosin IXb (Myo9b)
LZ	0.51579686	0.008490469	**Mpa2l**	macrophage activation 2 like (Mp
LZ	0.517435894	0.018657803	**Slc35f5**	solute carrier family 35, member
LZ	0.517595488	0.013470867	**Pdlim7**	PDZ and LIM domain 7
LZ	0.518713076	0.019701629	**Evl**	Ena-vasodilator stimulated phosp
LZ	0.520204705	0.048624266	**Akap8l**	A kinase (PRKA) anchor protein 8
LZ	0.523159132	0.023404862	**Sdhaf1**	succinate dehydrogenase comple
LZ	0.524143388	0.001892239	**Napsa**	napsin A aspartic peptidase (Nap
LZ	0.528638052	0.010843413	**Lat2**	linker for activation of T cells fam
LZ	0.53084957	0.007117466	**Pik3ap1**	phosphoinositide-3-kinase adapte
LZ	0.534917771	0.049596721	**Apex1**	apurinic/apyrimidinic endonuclea
LZ	0.535236946	0.003433154	**Flna**	filamin, alpha (Flna) XM_920635
LZ	0.536212034	0.001438889	**Stat3**	signal transducer and activator of
LZ	0.540551652	0.038390615	**Dexi**	dexamethasone-induced transcri
LZ	0.540565824	0.001449606	**Sh2b3**	SH2B adaptor protein 3 (Sh2b3)
LZ	0.540875838	0.025948865	**C130026I21Rik**	RIKEN cDNA C130026I21 gene
LZ	0.549345791	0.000263879	**Pxk**	PX domain containing serine/thre
LZ	0.549473185	0.048717552	**Relb**	avian reticuloendotheliosis viral (
LZ	0.549589795	0.00954767	**Nab1**	Ngfi-A binding protein 1 (Nab1)
LZ	0.553407468	0.04600299	**Tnfaip3**	tumor necrosis factor, alpha-indu

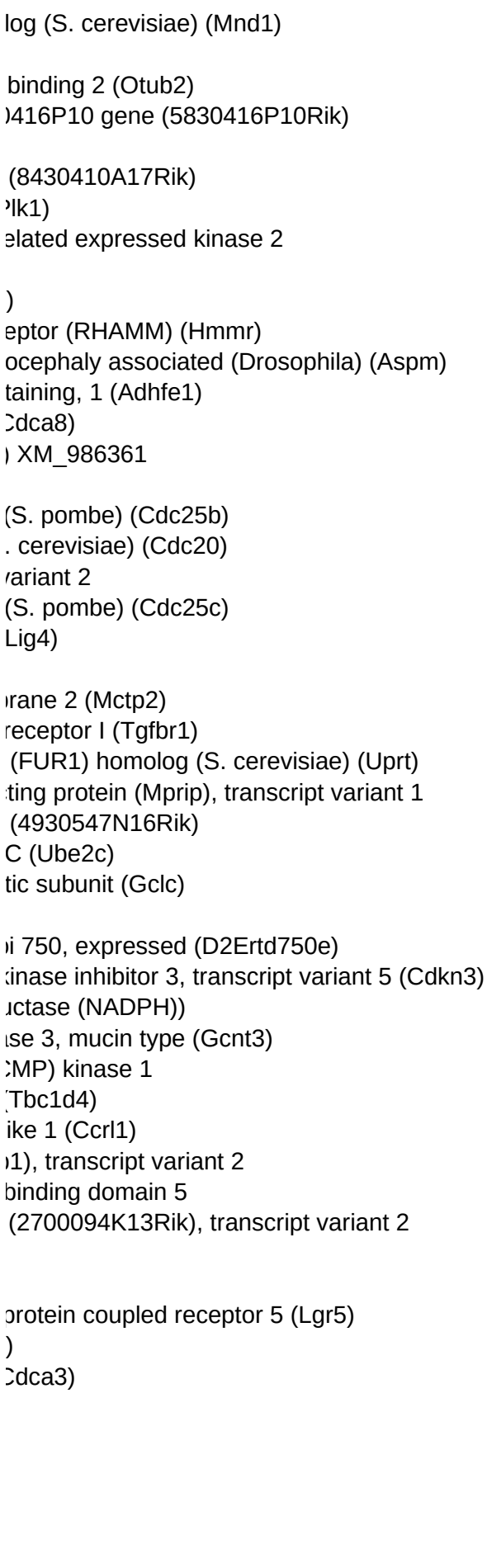
LZ	0.553519408	0.025790926	**Clip2**	CAP-GLY domain containing link
LZ	0.559368934	0.014554822	**Erp44**	endoplasmic reticulum protein 44
LZ	0.560670317	0.002473238	**Lpxn**	leupaxin (Lpxn)
LZ	0.561059517	0.047469736	**Zfp36l1**	zinc finger protein 36, C3H type-l
LZ	0.562590787	0.026166668	**Cdc14a**	CDC14 cell division cycle 14 hom
LZ	0.562951542	0.002645785	**Dennd4b**	DENN/MADD domain containing
LZ	0.563502741	0.046650271	**Akap5**	A kinase (PRKA) anchor protein 5
LZ	0.564772044	0.014739665	**Rasa2**	RAS p21 protein activator 2 (Ras
LZ	0.565461606	0.037462462	**Pecam1**	platelet/endothelial cell adhesion
LZ	0.567027184	0.000810774	**Faim3**	Fas apoptotic inhibitory molecule
LZ	0.569974579	0.010165039	**Acap1**	ArfGAP with coiled-coil, ankyrin r
LZ	0.57129857	0.003435403	**Invs**	inversin
LZ	0.573156946	0.045470312	**Pkib**	protein kinase inhibitor beta, cAM
LZ	0.585637213	0.003613503	**Stap1**	signal transducing adaptor family
LZ	0.586342408	0.005113015	**BC013712**	cDNA sequence BC013712 (BC0
LZ	0.587395568	0.00258917	**Lyst**	lysosomal trafficking regulator (Ly
LZ	0.601911889	0.012731509	**Plxnc1**	plexin C1
LZ	0.604551471	0.049651621	**Mxd4**	Max dimerization protein 4 (Mxd4
LZ	0.607172358	0.007831777	**Lrrc33**	leucine rich repeat containing 33
LZ	0.609808823	0.013513413	**Xylt1**	xylosyltransferase 1 (Xylt1)
LZ	0.612210695	0.037698406	**Birc3**	baculoviral IAP repeat-containing
LZ	0.613959808	0.000582037	**Swap70**	SWA-70 protein
LZ	0.616858996	0.047469736	**B4galnt1**	beta-1,4-N-acetyl-galactosaminyl
LZ	0.617363332	0.046279215	**Apoe**	apolipoprotein E (Apoe)
LZ	0.618086452	0.006586233	**Spag9**	sperm associated antigen 9 (Spa
LZ	0.618715794	0.007083298	**Rgs2**	regulator of G-protein signaling 2
LZ	0.620057319	0.025105291	**Kdm6b**	KDM1 lysine (K)-specific demeth
LZ	0.623584549	0.023899705	**Havcr1**	hepatitis A virus cellular receptor
LZ	0.629634435	0.025962994	**Plekho2**	pleckstrin homology domain cont
LZ	0.630159059	0.019844051	**Aim1l**	PREDICTED: absent in melanom
LZ	0.63412192	0.01884947	**Il2rg**	interleukin 2 receptor, gamma ch
LZ	0.63700633	0.040039071	**Pip4k2a**	phosphatidylinositol-5-phosphate
LZ	0.639774929	0.002572445	**Bcl11a**	B-cell CLL/lymphoma 11A (zinc fi
LZ	0.640947026	0.028079559	**Jarid2**	jumonji, AT rich interactive domai
LZ	0.641275245	0.048624266	**Nlrc5**	NLR family, CARD domain conta
LZ	0.645933115	0.009894932	**Ddit3**	DNA-damage inducible transcript
LZ	0.646566776	0.001813995	**Mdn1**	midasin homolog (yeast) (Mdn1)
LZ	0.647005149	0.00602517	**Dusp10**	dual specificity phosphatase 10 (
LZ	0.647394562	0.017854711	**Egr3**	early growth response 3
LZ	0.648916631	0.003613503	**Atp8a1**	ATPase, aminophospholipid trans
LZ	0.659596878	0.045470312	**Glcci1**	glucocorticoid induced transcript
LZ	0.659764551	0.033720365	**Serpinb6b**	serine (or cysteine) peptidase inh
LZ	0.664953954	0.023579734	**Cybasc3**	cytochrome b, ascorbate depend
LZ	0.669172235	0.018369698	**Nfkb2**	nuclear factor of kappa light poly
LZ	0.67208698	0.027180144	**Bcl2**	B-cell leukemia/lymphoma 2 (Bcl
LZ	0.675529612	0.00331073	**Tet2**	tet methylcytosine dioxygenase 2
LZ	0.676022247	0.000117382	**Sorl1**	sortilin-related receptor, LDLR cla
LZ	0.680925904	0.000263879	**Bank1**	B-cell scaffold protein with ankyri
LZ	0.684252085	0.015615826	**Acaca**	acetyl-CoA carboxylase alpha
LZ	0.688011429	0.000807718	**Ciita**	class II transactivator (Ciita)

LZ	0.693606401	0.022888622	**Bcor**	Bcl6 interacting corepressor (Bcc
LZ	0.694136336	0.008722622	**Syngr2**	synaptogyrin 2 (Syngr2)
LZ	0.696112872	0.005678917	**A530032D15Rik**	RIKEN cDNA A530032D15Rik ge
LZ	0.697226544	0.009138268	**Cd40**	CD40 antigen (Cd40), transcript
LZ	0.704184929	0.013012004	**Snx29**	sorting nexin 29 (Snx29)
LZ	0.705690352	0.004123067	**Tle3**	transducin-like enhancer of split
LZ	0.714476174	0.047551315	**Chst14**	carbohydrate (N-acetylgalactosa
LZ	0.71671025	0.000324173	**Ifi30**	interferon gamma inducible prote
LZ	0.719299642	0.003586652	**Gpr171**	G protein-coupled receptor 171 (
LZ	0.725681724	0.011095521	**Gcnt1**	glucosaminyl (N-acetyl) transfera
LZ	0.728680047	0.007900884	**Plscr1**	phospholipid scramblase 1 (Plscr
LZ	0.732725694	0.000165463	**Dip2b**	DIP2 disco-interacting protein 2 h
LZ	0.732979147	0.001003539	**Trim7**	tripartite motif-containing 7
LZ	0.738102172	0.019547937	**Gimap6**	GTPase, IMAP family member 6
LZ	0.740794162	0.007083298	**Arid3b**	AT rich interactive domain 3B (BR
LZ	0.744283436	0.013318409	**D130040H23Rik**	RIKEN cDNA D130040H23 gene
LZ	0.74703173	0.013513413	**Lmo2**	LIM domain only 2 (Lmo2)
LZ	0.748445154	0.031206608	**C330006D17Rik**	RIKEN cDNA C330006D17 gene
LZ	0.750924282	0.036597067	**H2-Oa**	histocompatibility 2, O region alp
LZ	0.753748138	0.00521494	**Smarca2**	SWI/SNF related, matrix associa
LZ	0.753952192	0.022201911	**Nfkbia**	nuclear factor of kappa light poly
LZ	0.755402379	0.022598849	**Rabgef1**	RAB guanine nucleotide exchang
LZ	0.757906572	0.001294269	**Itpr1**	inositol 1,4,5-triphosphate recept
LZ	0.758842483	0.033147966	**Sp140**	Sp140 nuclear body protein (Sp1
LZ	0.765380533	0.007136636	**Gpcpd1**	glycerophosphocholine phospho
LZ	0.768446365	0.001935913	**Parm1**	prostate androgen-regulated muc
LZ	0.774912916	0.000789883	**Map3k1**	mitogen-activated protein kinase
LZ	0.775387048	0.000436664	**Hvcn1**	hydrogen voltage-gated channel
LZ	0.775620889	0.026104037	**Rab37**	RAB37, member of RAS oncoge
LZ	0.777525352	0.002138432	**Heg1**	HEG homolog 1 (zebrafish) (Heg
LZ	0.782408405	0.000807718	**Slamf1**	signaling lymphocytic activation r
LZ	0.789951794	0.000101643	**Sh3tc1**	SH3 domain and tetratricopeptide
LZ	0.790595771	0.018697535	**Inpp4b**	inositol polyphosphate-4-phospha
LZ	0.791047248	0.00120965	**Jak3**	Janus kinase 3 (Jak3)
LZ	0.793795872	0.042196535	**Rnf122**	ring finger protein 122 (Rnf122)
LZ	0.797773978	0.017452357	**AW549877**	expressed sequence AW549877
LZ	0.802272199	0.022888622	**Lck**	lymphocyte protein tyrosine kinas
LZ	0.803523596	0.007207305	**Gadd45g**	growth arrest and DNA-damage-
LZ	0.80527627	3.41E-05	**Jak2**	Janus kinase 2 (Jak2), transcript
LZ	0.813298383	0.000549759	**Fbxw7**	F-box and WD-40 domain protein
LZ	0.81352568	0.008174989	**Gm12824**	TraB domain containing 2B
LZ	0.814920365	0.001007099	**Hivep3**	human immunodeficiency virus ty
LZ	0.819599612	0.00817569	**Ccnd2**	cyclin D2
LZ	0.836543484	0.005678917	**Grm6**	glutamate receptor, metabotropic
LZ	0.837892097	0.006475323	**Pacsin1**	protein kinase C and casein kina
LZ	0.838525768	0.001438889	**Ifngr2**	interferon gamma receptor 2 (Ifng
LZ	0.842841696	0.003102467	**A630001G21Rik**	RIKEN cDNA A630001G21 gene
LZ	0.85108452	0.002561375	**Fmnl3**	formin-like 3 (Fmnl3)
LZ	0.85642007	0.045470312	**Tlr1**	toll-like receptor 1 (Tlr1)
LZ	0.868613343	0.001990237	**Man1a**	mannosidase 1, alpha

LZ	0.876798767	0.000582037	**Plekhm3**	pleckstrin homology domain cont
LZ	0.893173787	0.010398958	**5830405N20Rik**	RIKEN cDNA 5830405N20 gene
LZ	0.89998608	0.001488641	**Arhgap26**	Rho GTPase activating protein 2
LZ	0.901558928	0.007088788	**Slc23a2**	solute carrier family 23 (nucleoba
LZ	0.903831584	1.79E-05	**Syne1**	synaptic nuclear envelope 1 (Syn
LZ	0.909936575	0.004865501	**Wdfy2**	WD repeat and FYVE domain co
LZ	0.910678005	0.025962994	**Ms4a4c**	membrane-spanning 4-domains,
LZ	0.911603566	0.001553294	**Chd2**	chromodomain helicase DNA bin
LZ	0.913416804	0.001448152	**Plk3**	polo-like kinase 3
LZ	0.916950316	0.002131611	**B3gnt5**	UDP-GlcNAc:betaGal beta-1,3-N
LZ	0.920193975	0.015523712	**Batf**	basic leucine zipper transcription
LZ	0.933225887	0.000222929	**Slc25a19**	solute carrier family 25 (mitochor
LZ	0.944414793	0.025180195	**Wls**	wntless homolog (Drosophila)
LZ	0.950425084	0.000549759	**Cd72**	CD72 antigen (Cd72)
LZ	0.955865179	0.00010461	**Fcer2a**	Fc receptor, IgE, low affinity II, al
LZ	0.967445454	0.035087186	**Casp4**	caspase 4, apoptosis-related cys
LZ	0.978543441	0.014664116	**Ccr6**	chemokine (C-C motif) receptor 6
LZ	0.981437142	0.003475031	**Gimap3**	GTPase, IMAP family member 3
LZ	0.98284845	0.001448152	**Slfn2**	schlafen 2 (Slfn2)
LZ	0.984068459	0.017452357	**Bcl3**	B-cell leukemia/lymphoma 3 (Bcl
LZ	0.986183432	0.028917506	**Tm6sf1**	transmembrane 6 superfamily me
LZ	0.997632712	0.036597067	**Ebi3**	Epstein-Barr virus induced gene
LZ	0.998750166	0.003931098	**Tagap**	T-cell activation Rho GTPase-act
LZ	1.0009083	0.000259935	**Cr2**	complement receptor 2 (Cr2)
LZ	1.002513029	0.003630117	**Gpr183**	G protein-coupled receptor 183
LZ	1.008206879	0.000566415	**Tnfrsf14**	tumor necrosis factor receptor su
LZ	1.010690211	0.001553294	**Gm9861**	predicted gene 9861
LZ	1.029744878	0.006142655	**Ccdc17**	coiled-coil domain containing 17
LZ	1.051242771	0.00463972	**Pdcd4**	programmed cell death 4 (Pdcd4
LZ	1.061393214	0.005681814	**Capg**	capping protein (actin filament), g
LZ	1.072452325	0.00125369	**St7**	suppression of tumorigenicity 7
LZ	1.076213909	0.004860458	**Gpr65**	G-protein coupled receptor 65 (G
LZ	1.096311156	0.042343512	**Chd7**	chromodomain helicase DNA bin
LZ	1.104695554	0.028755578	**Dear1**	dual endothelin 1/angiotensin II r
LZ	1.105351652	0.000259935	**Samsn1**	SAM domain, SH3 domain and n
LZ	1.107073754	0.014146229	**Ncf1**	neutrophil cytosolic factor 1 (Ncf1
LZ	1.121429345	0.000117382	**Sh3bp2**	SH3-domain binding protein 2 (S
LZ	1.125745693	1.79E-05	**Cd86**	CD86 antigen (Cd86)
LZ	1.126529827	0.003433154	**Nr4a1**	nuclear receptor subfamily 4, gro
LZ	1.131950692	0.000232622	**Cd83**	CD83 antigen (Cd83)
LZ	1.134708719	0.001869975	**Phf11**	PHD finger protein 11 (Phf11)
LZ	1.143645892	0.000263879	**S1pr3**	sphingosine-1-phosphate recepto
LZ	1.15005459	0.000789883	**Plbd1**	phospholipase B domain containi
LZ	1.172493471	0.01532512	**Arhgef3**	Rho guanine nucleotide exchang
LZ	1.208960683	0.013513413	**Marcks**	myristoylated alanine rich protein
LZ	1.217581666	0.013322623	**Hhex**	hematopoietically expressed hom
LZ	1.246464223	0.026860291	**Cd69**	CD69 antigen (Cd69) XM_92557
LZ	1.266351407	0.00954767	**St8sia6**	ST8 alpha-N-acetyl-neuraminide
LZ	1.269466781	0.001331313	**Snn**	stannin (Snn)
LZ	1.3160873	0.000222929	**Hapln1**	hyaluronan and proteoglycan link

LZ	1.328294638	0.001869975	**Bcl2a1c**	B-cell leukemia/lymphoma 2 rela
LZ	1.409067192	0.00037902	**Gimap4**	GTPase, IMAP family member 4
LZ	1.424510751	4.02E-07	**Dock10**	PREDICTED: dedicator of cytoki
LZ	1.470006814	0.000117382	**Shank1**	PREDICTED: SH3/ankyrin doma
LZ	1.48786307	0.000384986	**Bcl2a1d**	B-cell leukemia/lymphoma 2 rela
LZ	1.492959219	0.004626223	**Lifr**	leukemia inhibitory factor recepto
LZ	1.529568588	0.004737605	**Egr2**	early growth response 2
LZ	1.616319697	0.000263879	**Lrrk2**	leucine-rich repeat kinase 2 (Lrrk
LZ	1.638425782	0.013778759	**Ephx1**	epoxide hydrolase 1, microsomal
LZ	1.830269343	0.000180681	**Zfp318**	zinc finger protein 318 (Zfp318),
LZ	1.872994783	3.03E-06	**Il4i1**	interleukin 4 induced 1 (Il4i1)
LZ	1.904977746	0.000573693	**Aldoc**	aldolase C, fructose-bisphosphat
LZ	2.029408857	4.02E-07	**Ryr2**	ryanodine receptor 2, cardiac (Ry
LZ	2.03651376	0.00037902	**Tanc2**	tetratricopeptide repeat, ankyrin
LZ	2.350900236	0.000231836	**Serpinb1a**	serine (or cysteine) peptidase inh

Figure 5


log (S. cerevisiae) (Mnd1)
binding 2 (Otub2)
)416P10 gene (5830416P10Rik)
(8430410A17Rik)
Plk1)
elated expressed kinase 2
)
eptor (RHAMM) (Hmmr)
ocephaly associated (Drosophila) (Aspm)
taining, 1 (Adhfe1)
Cdca8)
) XM_986361
(S. pombe) (Cdc25b)
. cerevisiae) (Cdc20)
variant 2
(S. pombe) (Cdc25c)
Lig4)
rane 2 (Mctp2)
receptor I (Tgfbr1)
(FUR1) homolog (S. cerevisiae) (Uprt)
ting protein (Mprip), transcript variant 1
(4930547N16Rik)
C (Ube2c)
tic subunit (Gclc)
i 750, expressed (D2Ertd750e)
kinase inhibitor 3, transcript variant 5 (Cdkn3)
uctase (NADPH))
se 3, mucin type (Gcnt3)
CMP) kinase 1
(Tbc1d4)
ike 1 (Ccrl1)
1), transcript variant 2
binding domain 5
(2700094K13Rik), transcript variant 2
protein coupled receptor 5 (Lgr5)
)
Cdca3)

cript 2 (Gcet2)
drolase, isoform 1b, subunit 3

ctor 2 alpha kinase 3
2 (Scd2)

ol2)
lex component, homolog (S. cerevisiae)
ene homolog A (ras related) (Rala)
ted, actin dependent regulator of chromatin, subfamily a, member 4 (Smarca4)
)17612)
RAD 30 related) (Polh)

log (S. cerevisiae) (Pif1)

(F630043A04Rik)
otein homolog (Xenopus laevis) (Tpx2)
2
transcription factor 2
P53 inducible) (Rrm2b)
ttg1)
kinase kinase 15
(Akt3)
)a)
)016H08 gene, transcript variant 3 (9430016H08Rik)
subunit 2 (Cks2)

nembrane protein 2 (Tram2)

(1190002H23Rik)
S

ontaining protein 3
ynthetase 2 (Prps2)
7l)

(C330027C09Rik)

ted X linked (Xkrx)

pna2)
4931429I11Rik)
SII) 1 (Tcea1)
H
ex, subunit B, iron sulfur (Ip) (Sdhb), nuclear gene encoding mitochondrial protein
oli) (Neil1)

518C (Mrps18c), nuclear gene encoding mitochondrial protein

2 (Efcab2)
dc1b)
(Hdgf)
)
bf4)

ocus G5B (Ly6g5b)
ctor 2a (Eif2a)
domain containing 10 (Chchd10)

34 (Mrpl34), nuclear gene encoding mitochondrial protein
ynlt3)
rminal like (Cdkn2aipnl)
(gravin) 12 (Akap12)
53 (Mrp63)
or 10
nscript variant 2
019)
(Ccdc18)
ndc1)
associated
n1)
nase 1-like (Gpd1l)
hreonine kinase B
L
79407)
e, complex III subunit XI
)

tcr1)
mine synthetase) (Glul)
phoprotein 32 family, member E (Anp32e)

ne) 1 alpha subcomplex, 8 (Ndufa8)
d21)
g enzyme 1 (Ufc1)
ecific factor 2 (Cpsf2)

ne) 1 beta subcomplex, 9 (Ndufb9)
5 (Ckap5)
(Rasgrp2)

, transcript variant 7 (Lmo7)
2)
a 1 (Pola1)
ne) Fe-S protein 2 (Ndufs2)
ant 1
26S subunit, ATPase 1
(Rbbp8)
oc)

olypeptide 5 (Gtf2h5)
.)
ɛrmal (Fabp5)

(2010001M09Rik)
ɔmolog A (S. cerevisiae) (Asf1a)
tein), alpha-like 1 (Ctnnal1)
l2)
ɔy monoclonal antibody Ki 67 (Mki67)
ɔunit 1 (Psf1 homolog), transcript variant 4 (Gins1)

ɲ containing 5 (Acbd5)
1 (Psat1)
ɔle growth 5

3)
e, Rieske iron-sulfur polypeptide 1 (Uqcrfs1)
ɔm38)
(C. elegans) (Mtch2), nuclear gene encoding mitochondrial protein
ɔoi 653, expressed (D18Ertd653e)

ne) 1, subcomplex unknown, 2 (Ndufc2)
A (ABC1), member 3 (Abca3), transcript variant 1
ɲber 2 (Scarb2)
t), nuclear gene encoding mitochondrial protein
ne) 1 beta subcomplex, 6 (Ndufb6), nuclear gene encoding mitochondrial protein
transcript variant 2
AI314180)
ɜubunit D2 (Ncapd2)
n) 26S subunit, non-ATPase, 1 (Psmd1)
(Txndc11), transcript variant 1
(Dr1)

ɡ protein 3 (Hp1bp3)

61)
ctor 4A, isoform 3 (Eif4a3)
ɹrs)

(1110059E24Rik)
ɔgenase 4 (Hsd17b4)
ɑl protein 1 (Mns1)
ɲase (ubiquinone) 1 alpha subcomplex 11, transcript variant 6 (Ndufa11)
RE) repeats (Rere)

ɜcript variant 1

ant 1
nitochondrial Fo complex, subunit B1
(0610009D07Rik)
eficient 6 (MIS5 homolog, S. pombe) (S. cerevisiae) (Mcm6)
ein 2 (Mbd2)
ype XI, alpha (Scn11a)

(Ccdc21)
)1)
nucleoprotein polypeptide F (Snrpf)
L 3 (Ube2l3)
r RNA associated (S. cerevisiae)

), nuclear gene encoding mitochondrial protein
ase-like 1 (Inppl1)

bunit 5 (Anapc5), transcript variant 1
mine-hydrolyzing)-like 1 (Qrsl1)
d RING finger domains 2 (Uhrf2)
)
atE catalytic subunit
)m8a)
)7, member B

mino acid transporter), member 5 (Slc1a5)

lypeptide 24 (Ddx24)

p2b)
1)
itochondrial F1 complex, beta subunit (Atp5b), nuclear gene encoding mitochondrial protein
1)
mily (Ran)
eat domain containing 1

(Dnahc8)
nitochondrial F0 complex, subunit F (Atp5j), nuclear gene encoding mitochondrial protein
, transcript variant 1

l2afz)
)
g factor 1 (Pou2af1)
RNA polymerase II, polypeptide A) small phosphatase 2 (Ctdsp2)
y C, member 9 (Dnajc9)
)phan 5-monooxygenase activation protein, epsilon polypeptide (Ywhae)
osolic), class A member 1 (Hsp90aa1)

acetylgalactosamine 3-beta-galactosyltransferase, 1 (C1galt1)

carbonate cotransporter, member 7

ting protein (Pdcd6ip)
oprotein U-like 1 (Hnrnpul1), transcript variant 2
n2r26)

ein (purine-binding transcription factor) (Maz)
)029M09 gene (2700029M09Rik)

sporter), member 5 (Slc30a5)

binding domain 2 (Hmgn2)
(2610305D13Rik)
ransferase 1 (St6gal1)
nembrane protein 1 (Tram1)

ceptor type, C
)61194)
(Fchsd2)
s Mb2 (H2-DMb2)

se-2,6-biphosphatase 4 (Pfkfb4)
em131)
x, subunit 6-like (Cnot6l), transcript variant 2
4A
XM_001000874 XM_001000888 XM_001000902 XM_001000914 XM_993937 XM_993952 XM_993
mily, member 12 (Parp12)

seudogene
ntaining 4

ceptor type, E (Ptpre)
)m26)

n CXADR antigen 1 (Amica1)
Rel)
)4302
iated serine/threonine kinase family member 4, transcript variant 5 (Mast4)
or 2 (Itpr2), transcript variant 2
ntaining 1C (Jmjd1c)

1 (Tmf1)
rotein 1) domain containing 2 (Dbndd2), transcript variant 2
homology (CH) domain containing 1 (Lrch1)
Nf-kappa B activator (Tank)

7 (Arhgap17)
A-B) receptor, 1 (Gabbr1)

)

variant 2
r (Lrba), transcript variant 1
ain containing 3 (Mfsd3)
(Unc93b1)
em123)
ning 23 (Zdhhc23)
ocarcinoma transcript 1 (non-coding RNA)
oliferative (Btg1)
golgin subfamily b, macrogolgin 1, transcript variant 9 (Golgb1)
tor 1 (Ifnar1)
ap1)
iant 2
peptide gene enhancer in B-cells 1, p105 (Nfkb1)

on factor 2 (Pou2f2)
2
1 (Tgif1)

a2l)
F5 (Slc35f5)

hoprotein (Evl) XM_923143
8-like (Akap8l)
ex assembly factor 1
sa)
ily, member 2 (Lat2), transcript variant 2
or protein 1 (Pik3ap1)
se 1 (Apex1)
XM_920660
f transcription 3 (Stat3), transcript variant 1
pt (Dexi)

(C130026I21Rik), transcript variant 1
eonine kinase
v-rel) oncogene related B (Relb)

ced protein 3 (Tnfaip3)

er protein 2 (Clip2), transcript variant 2
ł

ike 1 (Zfp36l1)
nolog A (S. cerevisiae) (Cdc14a)
4B (Dennd4b)
5
ia2)
molecule 1 (Pecam1), transcript variant 1
3 (Faim3)
epeat and PH domains 1

MP dependent, testis specific (Pkib), transcript variant 2
member 1 (Stap1)
013712)
yst)

1)
(Lrrc33)

3 (Birc3)

transferase 1 (B4galnt1), transcript variant 1

g9), transcript variant 3

ylase 6B
1 (Havcr1)
aining, family O member 2 (Plekho2)
na 1-like, transcript variant 1 (Aim1l)
ain (Il2rg)
4-kinase, type II, alpha (Pip4k2a)
inger protein) (Bcl11a)
n 2 (Jarid2)
ining 5
t 3 (Ddit3)

Dusp10)

sporter (APLT), class I, type 8A, member 1 (Atp8a1), transcript variant 2
1 (Glcci1), transcript variant 2
nibitor, clade B, member 6b (Serpinb6b)
lent 3 (Cybasc3)
peptide gene enhancer in B cells 2, p49/p100
2), transcript variant 2
ass A repeats-containing (Sorl1)
n repeats 1 (Bank1)

or), transcript variant a

ene (A530032D15Rik)
variant 5

3, homolog of Drosophila E(spl) (Tle3)
mine 4-0) sulfotransferase 14 (Chst14)
in 30 (Ifi30)
Gpr171)
se 1, core 2 (Gcnt1)
1)
omolog B (Drosophila) (Dip2b)

(Gimap6)
RIGHT-like) (Arid3b)
(D130040H23Rik)

ha locus (H2-Oa)
ted, actin dependent regulator of chromatin, subfamily a, member 2 (Smarca2), transcript variant 1
peptide gene enhancer in B-cells inhibitor, alpha (Nfkbia)
ge factor (GEF) 1 (Rabgef1)
or 1 (Itpr1)
.40)
diesterase GDE1 homolog (S. cerevisiae)
cin-like protein 1
kinase kinase 1 (Map3k1)
1 (Hvcn1), transcript variant 1
ne family (Rab37)
1)
nolecule family member 1 (Slamf1)
e repeats 1 (Sh3tc1)
atase, type II

(AW549877)
se (Lck)
inducible 45 gamma (Gadd45g)
variant 1
n 7 (Fbxw7)

ype I enhancer binding protein 3

: 6 (Grm6)
se substrate in neurons 1 (Pacsin1)
gr2)

:aining, family M, member 3 (Plekhm3)
(5830405N20Rik)
6 (Arhgap26)
ase transporters), member 2 (Slc23a2)
ne1), transcript variant 2
ntaining 2 (Wdfy2)
subfamily A, member 4C (Ms4a4c)
ding protein 2 (Chd2)

l-acetylglucosaminyltransferase 5
factor, ATF-like (Batf)
ndrial thiamine pyrophosphate carrier), member 19 (Slc25a19), nuclear gene encoding mitochondrial

pha polypeptide (Fcer2a)
teine peptidase (Casp4)
6 (Ccr6)

3)
ember 1 (Tm6sf1)
3 (Ebi3)
tivating protein (Tagap)

perfamily, member 14 (herpesvirus entry mediator) (Tnfrsf14)

)
gelsolin-like (Capg), transcript variant 1

pr65)
ding protein 7 (Chd7)
eceptor 1 homolog (rat) (Dear1)
uclear localization signals, 1 (Samsn1)
L)
h3bp2)

up A, member 1 (Nr4a1)

or 3 (S1pr3)
ing 1
e factor (GEF) 3 (Arhgef3)
kinase C substrate (Marcks)
neobox (Hhex)
2
alpha-2,8-sialyltransferase 6 (St8sia6)

protein 1 (Hapln1)

ted protein A1c (Bcl2a1c)
(Gimap4), transcript variant 1
nesis 10, transcript variant 3 (Dock10)
in gene 1, transcript variant 1 (Shank1)
ted protein A1d (Bcl2a1d)
r (Lifr)

2)
(Ephx1)
transcript variant 1

e (Aldoc)
r2)
repeat and coiled-coil containing 2 (Tanc2) XM_001000900 XM_001000913 XM_001000922 XM_00
ibitor, clade B, member 1a (Serpinb1a)

993 XM_994038 XM_994057 XM_994076

protein

1004226 XM_001004229 XM_001004235 XM_001004240 XM_903099 XM_903101 XM_903102 XI

M_911892 XM_922187 XM_922195 XM_922205 XM_922212 XM_922217 XM_922223 XM_984944

Common DZ/LZ differentially expressed genes from IgG1 GC in BALB/c backgrou

DZ or LZ	symbol	DEFINITION
DZ	1110059E24Rik	RIKEN cDNA 1110059E24 gene (1110059E24Rik)
DZ	1190002H23Rik	RIKEN cDNA 1190002H23 gene (1190002H23Rik)
DZ	1500003O03Rik	calcineurin-like EF hand protein 1
DZ	4930547N16Rik	RIKEN cDNA 4930547N16 gene (4930547N16Rik)
DZ	5830416P10Rik	PREDICTED: RIKEN cDNA 5830416P10 gene (58304
DZ	8430410A17Rik	RIKEN cDNA 8430410A17 gene (8430410A17Rik)
DZ	Abca3	ATP-binding cassette, sub-family A (ABC1), member 3
DZ	Acbd5	acyl-Coenzyme A binding domain containing 5 (Acbd5)
DZ	Ada	adenosine deaminase (Ada)
DZ	Adhfe1	alcohol dehydrogenase, iron containing, 1 (Adhfe1)
DZ	AI314180	expressed sequence AI314180 (AI314180)
DZ	Akap12	A kinase (PRKA) anchor protein (gravin) 12 (Akap12)
DZ	Akt3	thymoma viral proto-oncogene 3 (Akt3)
DZ	Anp32e	acidic (leucine-rich) nuclear phosphoprotein 32 family,
DZ	Anxa2	annexin A2 (Anxa2)
DZ	Asf1a	ASF1 anti-silencing function 1 homolog A (S. cerevisiae
DZ	Aspm	asp (abnormal spindle)-like, microcephaly associated (
DZ	Atp5b	ATP synthase, H+ transporting mitochondrial F1 compl
DZ	BC017612	cDNA sequence BC017612 (BC017612)
DZ	Bcl7a	B-cell CLL/lymphoma 7A (Bcl7a)
DZ	Blvrb	biliverdin reductase B (flavin reductase (NADPH))
DZ	Bub1b	BUB1 mitotic checkpoint serine/threonine kinase B
DZ	C1galt1	core 1 synthase, glycoprotein-N-acetylgalactosamine 3
DZ	C330027C09Rik	RIKEN cDNA C330027C09 gene (C330027C09Rik)
DZ	C79407	expressed sequence C79407 (C79407)
DZ	Calm3	calmodulin 3 (Calm3)
DZ	Ccdc18	coiled-coil domain containing 18 (Ccdc18)
DZ	Ccna2	cyclin A2 (Ccna2)
DZ	Ccnb1	cyclin B1 (Ccnb1)
DZ	Ccnb2	cyclin B2 (Ccnb2)
DZ	Ccnd3	cyclin D3 (Ccnd3), transcript variant 1
DZ	Ccrl1	chemokine (C-C motif) receptor-like 1 (Ccrl1)
DZ	Cdc20	cell division cycle 20 homolog (S. cerevisiae) (Cdc20)
DZ	Cdc25b	cell division cycle 25 homolog B (S. pombe) (Cdc25b)
DZ	Cdc25c	cell division cycle 25 homolog C (S. pombe) (Cdc25c)
DZ	Cdca3	cell division cycle associated 3 (Cdca3)
DZ	Cdca8	cell division cycle associated 8 (Cdca8)
DZ	Cdkn2aipnl	CDKN2A interacting protein N-terminal like (Cdkn2aipn
DZ	Cdkn3	PREDICTED: cyclin-dependent kinase inhibitor 3, trans
DZ	Cenpa	centromere protein A (Cenpa)
DZ	Cenpe	centromere protein E (Cenpe)
DZ	Cenpf	centromere protein F (Cenpf)
DZ	Cenpv	centromere protein V
DZ	Cep55	centrosomal protein 55 (Cep55)
DZ	Cerk	ceramide kinase
DZ	Ckap2	cytoskeleton associated protein 2
DZ	Ckap5	cytoskeleton associated protein 5 (Ckap5)

DZ	Cmpk1	cytidine monophosphate (UMP-CMP) kinase 1
DZ	Cpsf2	cleavage and polyadenylation specific factor 2 (Cpsf2)
DZ	Ctdsp2	CTD (carboxy-terminal domain, RNA polymerase II, po
DZ	Ctnnal1	catenin (cadherin associated protein), alpha-like 1 (Ctn
DZ	D2Ertd750e	DNA segment, Chr 2, ERATO Doi 750, expressed (D2E
DZ	Dap	death-associated protein (Dap)
DZ	Dbf4	DBF4 homolog (S. cerevisiae) (Dbf4)
DZ	Depdc1b	DEP domain containing 1B (Depdc1b)
DZ	Dhfr	dihydrofolate reductase (Dhfr)
DZ	Ect2	ect2 oncogene (Ect2)
DZ	Eif2a	eukaryotic translation initiation factor 2a (Eif2a)
DZ	Eif2ak3	eukaryotic translation initiation factor 2 alpha kinase 3
DZ	F630043A04Rik	RIKEN cDNA F630043A04 gene (F630043A04Rik)
DZ	Fabp5	fatty acid binding protein 5, epidermal (Fabp5)
DZ	Fads2	fatty acid desaturase 2
DZ	Fam107b	family with sequence similarity 107, member B
DZ	Fli1	Friend leukemia integration 1 (Fli1)
DZ	Fundc1	FUN14 domain containing 1 (Fundc1)
DZ	Gcet2	germinal center expressed transcript 2 (Gcet2)
DZ	Gclc	glutamate-cysteine ligase, catalytic subunit (Gclc)
DZ	Gcnt3	glucosaminyl (N-acetyl) transferase 3, mucin type (Gcr
DZ	Glrx3	glutaredoxin 3 (Glrx3)
DZ	Gpd1l	glycerol-3-phosphate dehydrogenase 1-like (Gpd1l)
DZ	Hdac8	histone deacetylase 8 (Hdac8)
DZ	Helq	helicase, POLQ-like
DZ	Hist1h2bc	histone cluster 1, H2bc (Hist1h2bc)
DZ	Hmgn5	high-mobility group nucleosome binding domain 5
DZ	Hmmr	hyaluronan mediated motility receptor (RHAMM) (Hmr
DZ	Hp1bp3	heterochromatin protein 1, binding protein 3 (Hp1bp3)
DZ	Hspa2	heat shock protein 2 (Hspa2), transcript variant 2
DZ	Il17ra	interleukin 17 receptor A (Il17ra)
DZ	Inppl1	inositol polyphosphate phosphatase-like 1 (Inppl1)
DZ	Itgb3	integrin beta 3 (Itgb3)
DZ	Kif18b	kinesin family member 18B
DZ	Kif20a	kinesin family member 20A (Kif20a)
DZ	Kif2c	kinesin family member 2C (Kif2c) XM_986361
DZ	Kpna2	karyopherin (importin) alpha 2 (Kpna2)
DZ	Lgr5	leucine rich repeat containing G protein coupled recept
DZ	Lig4	ligase IV, DNA, ATP-dependent (Lig4)
DZ	Lipc	lipase, hepatic (Lipc)
DZ	Lmo7	PREDICTED: LIM domain only 7, transcript variant 7 (I
DZ	Lrwd1	leucine-rich repeats and WD repeat domain containing
DZ	Man2a1	mannosidase 2, alpha 1 (Man2a1)
DZ	Mbd2	methyl-CpG binding domain protein 2 (Mbd2)
DZ	Mcoln2	mucolipin 2 (Mcoln2), transcript variant 2
DZ	Mctp2	multiple C2 domains, transmembrane 2 (Mctp2)
DZ	Mki67	PREDICTED: antigen identified by monoclonal antibod
DZ	Mnd1	meiotic nuclear divisions 1 homolog (S. cerevisiae) (Mr
DZ	Mprip	myosin phosphatase Rho interacting protein (Mprip), tr
DZ	Mtf2	metal response element binding transcription factor 2

DZ	Myl4	myosin, light polypeptide 4 (Myl4)
DZ	Ncapd2	non-SMC condensin I complex, subunit D2 (Ncapd2)
DZ	Neil1	nei endonuclease VIII-like 1 (E. coli) (Neil1)
DZ	Nek2	NIMA (never in mitosis gene a)-related expressed kina
DZ	Nuf2	NUF2, NDC80 kinetochore complex component, homo
DZ	Otub2	OTU domain, ubiquitin aldehyde binding 2 (Otub2)
DZ	Pafah1b3	platelet-activating factor acetylhydrolase, isoform 1b, s
DZ	Phf19	PHD finger protein 19 (Phf19)
DZ	Phf3	PHD finger protein 3
DZ	Pif1	PIF1 5'-to-3' DNA helicase homolog (S. cerevisiae) (Pif
DZ	Plk1	polo-like kinase 1 (Drosophila) (Plk1)
DZ	Pola1	polymerase (DNA directed), alpha 1 (Pola1)
DZ	Polh	polymerase (DNA directed), eta (RAD 30 related) (Polh
DZ	Prps2	phosphoribosyl pyrophosphate synthetase 2 (Prps2)
DZ	Prr11	proline rich 11 (Prr11)
DZ	Psmc1	protease (prosome, macropain) 26S subunit, ATPase 1
DZ	Ptgr1	prostaglandin reductase 1 (Ptgr1)
DZ	Racgap1	Rac GTPase-activating protein 1
DZ	Rala	v-ral simian leukemia viral oncogene homolog A (ras re
DZ	Rbm38	RNA binding motif protein 38 (Rbm38)
DZ	Reln	reelin
DZ	Rere	arginine glutamic acid dipeptide (RE) repeats (Rere)
DZ	Rnf183	ring finger protein 183 (Rnf183)
DZ	Rrm2b	ribonucleotide reductase M2 B (TP53 inducible) (Rrm2
DZ	Scarb2	scavenger receptor class B, member 2 (Scarb2)
DZ	Scd2	stearoyl-Coenzyme A desaturase 2 (Scd2)
DZ	Scn11a	sodium channel, voltage-gated, type XI, alpha (Scn11a
DZ	Sdhb	succinate dehydrogenase complex, subunit B, iron sulf
DZ	Sepp1	selenoprotein P, plasma, 1 (Sepp1), transcript variant 2
DZ	Sft2d2	SFT2 domain containing 2 (Sft2d2)
DZ	Sgol2	shugoshin-like 2 (S. pombe) (Sgol2)
DZ	Slamf7	SLAM family member 7 (Slamf7)
DZ	Slc4a7	solute carrier family 4, sodium bicarbonate cotransport
DZ	Smarca4	SWI/SNF related, matrix associated, actin dependent r
DZ	Tacc3	transforming, acidic coiled-coil containing protein 3
DZ	Tcea1	transcription elongation factor A (SII) 1 (Tcea1)
DZ	Tcf3	transcription factor 3 (Tcf3), transcript variant 1
DZ	Tgfbr1	transforming growth factor, beta receptor I (Tgfbr1)
DZ	Top1	topoisomerase (DNA) I
DZ	Top2b	topoisomerase (DNA) II beta (Top2b)
DZ	Tpx2	TPX2, microtubule-associated protein homolog (Xenop
DZ	Tram2	translocating chain-associating membrane protein 2 (T
DZ	Tubb2c	tubulin, beta 2c (Tubb2c)
DZ	Txndc11	thioredoxin domain containing 11 (Txndc11), transcript
DZ	Ube2c	ubiquitin-conjugating enzyme E2C (Ube2c)
DZ	Ube2h	ubiquitin-conjugating enzyme E2H
DZ	Ube2s	ubiquitin-conjugating enzyme E2S
DZ	Xkrx	X Kell blood group precursor related X linked (Xkrx)
LZ	5830405N20Rik	RIKEN cDNA 5830405N20 gene (5830405N20Rik)
LZ	A630001G21Rik	RIKEN cDNA A630001G21 gene

LZ	Acaca	acetyl-CoA carboxylase alpha
LZ	Acap1	ArfGAP with coiled-coil, ankyrin repeat and PH domain
LZ	Akap5	A kinase (PRKA) anchor protein 5
LZ	Akap8l	A kinase (PRKA) anchor protein 8-like (Akap8l)
LZ	Aldoc	aldolase C, fructose-bisphosphate (Aldoc)
LZ	Apex1	apurinic/apyrimidinic endonuclease 1 (Apex1)
LZ	Arhgap17	Rho GTPase activating protein 17 (Arhgap17)
LZ	Arhgap26	Rho GTPase activating protein 26 (Arhgap26)
LZ	Arid3b	AT rich interactive domain 3B (BRIGHT-like) (Arid3b)
LZ	Atp9b	ATPase, class II, type 9B (Atp9b)
LZ	B3gnt5	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltra
LZ	B4galnt1	beta-1,4-N-acetyl-galactosaminyl transferase 1 (B4galr
LZ	Bank1	B-cell scaffold protein with ankyrin repeats 1 (Bank1)
LZ	Batf	basic leucine zipper transcription factor, ATF-like (Batf)
LZ	BC013712	cDNA sequence BC013712 (BC013712)
LZ	Bcl11a	B-cell CLL/lymphoma 11A (zinc finger protein) (Bcl11a)
LZ	Bcl2	B-cell leukemia/lymphoma 2 (Bcl2), transcript variant 2
LZ	Bcl3	B-cell leukemia/lymphoma 3 (Bcl3)
LZ	Bcor	Bcl6 interacting corepressor (Bcor), transcript variant a
LZ	Birc3	baculoviral IAP repeat-containing 3 (Birc3)
LZ	C130026I21Rik	RIKEN cDNA C130026I21 gene (C130026I21Rik), tran
LZ	Capg	capping protein (actin filament), gelsolin-like (Capg), tra
LZ	Casp4	caspase 4, apoptosis-related cysteine peptidase (Casp
LZ	Ccdc17	coiled-coil domain containing 17
LZ	Ccnd2	cyclin D2
LZ	Ccr6	chemokine (C-C motif) receptor 6 (Ccr6)
LZ	Cd180	CD180 antigen (Cd180)
LZ	Cd22	CD22 antigen (Cd22), transcript variant 2
LZ	Cd40	CD40 antigen (Cd40), transcript variant 5
LZ	Cd52	CD52 antigen
LZ	Cd53	CD53 antigen
LZ	Cd69	CD69 antigen (Cd69) XM_925572
LZ	Cd72	CD72 antigen (Cd72)
LZ	Cd83	CD83 antigen (Cd83)
LZ	Cd86	CD86 antigen (Cd86)
LZ	Chd2	chromodomain helicase DNA binding protein 2 (Chd2)
LZ	Ciita	class II transactivator (Ciita)
LZ	Cr2	complement receptor 2 (Cr2)
LZ	Ctsa	cathepsin A (Ctsa), transcript variant 2
LZ	Cybasc3	cytochrome b, ascorbate dependent 3 (Cybasc3)
LZ	Ddit3	DNA-damage inducible transcript 3 (Ddit3)
LZ	Dennd4b	DENN/MADD domain containing 4B (Dennd4b)
LZ	Dexi	dexamethasone-induced transcript (Dexi)
LZ	Dip2b	DIP2 disco-interacting protein 2 homolog B (Drosophila
LZ	Dock10	PREDICTED: dedicator of cytokinesis 10, transcript va
LZ	Dusp10	dual specificity phosphatase 10 (Dusp10)
LZ	Ebi3	Epstein-Barr virus induced gene 3 (Ebi3)
LZ	Egr2	early growth response 2
LZ	Egr3	early growth response 3
LZ	Ephx1	epoxide hydrolase 1, microsomal (Ephx1)

LZ	Erp44	endoplasmic reticulum protein 44
LZ	Evl	Ena-vasodilator stimulated phosphoprotein (Evl) XM_9
LZ	Faim3	Fas apoptotic inhibitory molecule 3 (Faim3)
LZ	Fcer2a	Fc receptor, IgE, low affinity II, alpha polypeptide (Fcer
LZ	Flna	filamin, alpha (Flna) XM_920635 XM_920660
LZ	Fmnl3	formin-like 3 (Fmnl3)
LZ	Gabbr1	gamma-aminobutyric acid (GABA-B) receptor, 1 (Gabb
LZ	Gadd45g	growth arrest and DNA-damage-inducible 45 gamma (
LZ	Gcnt1	glucosaminyl (N-acetyl) transferase 1, core 2 (Gcnt1)
LZ	Gimap3	GTPase, IMAP family member 3
LZ	Gimap4	GTPase, IMAP family member 4 (Gimap4), transcript v
LZ	Glcci1	glucocorticoid induced transcript 1 (Glcci1), transcript v
LZ	Gpr183	G protein-coupled receptor 183
LZ	Gpr65	G-protein coupled receptor 65 (Gpr65)
LZ	Gripap1	GRIP1 associated protein 1 (Gripap1)
LZ	H2-DMb2	histocompatibility 2, class II, locus Mb2 (H2-DMb2)
LZ	H2-Oa	histocompatibility 2, O region alpha locus (H2-Oa)
LZ	Hapln1	hyaluronan and proteoglycan link protein 1 (Hapln1)
LZ	Havcr1	hepatitis A virus cellular receptor 1 (Havcr1)
LZ	Heg1	HEG homolog 1 (zebrafish) (Heg1)
LZ	Hhex	hematopoietically expressed homeobox (Hhex)
LZ	Hivep3	human immunodeficiency virus type I enhancer bindinç
LZ	Hvcn1	hydrogen voltage-gated channel 1 (Hvcn1), transcript v
LZ	Ifi30	interferon gamma inducible protein 30 (Ifi30)
LZ	Ifngr2	interferon gamma receptor 2 (Ifngr2)
LZ	Il2rg	interleukin 2 receptor, gamma chain (Il2rg)
LZ	Il4i1	interleukin 4 induced 1 (Il4i1)
LZ	Inpp4b	inositol polyphosphate-4-phosphatase, type II
LZ	Invs	inversin
LZ	Itpr1	inositol 1,4,5-triphosphate receptor 1 (Itpr1)
LZ	Jarid2	jumonji, AT rich interactive domain 2 (Jarid2)
LZ	Kdm6b	KDM1 lysine (K)-specific demethylase 6B
LZ	Lck	lymphocyte protein tyrosine kinase (Lck)
LZ	Lifr	leukemia inhibitory factor receptor (Lifr)
LZ	Lmo2	LIM domain only 2 (Lmo2)
LZ	Lrrc33	leucine rich repeat containing 33 (Lrrc33)
LZ	Lrrk2	leucine-rich repeat kinase 2 (Lrrk2)
LZ	Lyst	lysosomal trafficking regulator (Lyst)
LZ	Man1a	mannosidase 1, alpha
LZ	Map3k1	mitogen-activated protein kinase kinase kinase 1 (Map
LZ	Marcks	myristoylated alanine rich protein kinase C substrate (M
LZ	Mast4	PREDICTED: microtubule associated serine/threonine
LZ	Mdn1	midasin homolog (yeast) (Mdn1)
LZ	Mpa2l	macrophage activation 2 like (Mpa2l)
LZ	Ms4a4c	membrane-spanning 4-domains, subfamily A, member
LZ	Nab1	Ngfi-A binding protein 1 (Nab1)
LZ	Napsa	napsin A aspartic peptidase (Napsa)
LZ	Ncf1	neutrophil cytosolic factor 1 (Ncf1)
LZ	Nfkb2	nuclear factor of kappa light polypeptide gene enhance
LZ	Nfkbia	nuclear factor of kappa light polypeptide gene enhance

LZ	Nlrc5	NLR family, CARD domain containing 5
LZ	Nr4a1	nuclear receptor subfamily 4, group A, member 1 (Nr4a
LZ	Pacsin1	protein kinase C and casein kinase substrate in neuron
LZ	Parm1	prostate androgen-regulated mucin-like protein 1
LZ	Pdcd4	programmed cell death 4 (Pdcd4)
LZ	Pdlim7	PDZ and LIM domain 7
LZ	Pfkfb4	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 4
LZ	Phf15	PHD finger protein 15 (Phf15)
LZ	Pik3ap1	phosphoinositide-3-kinase adaptor protein 1 (Pik3ap1)
LZ	Pkib	protein kinase inhibitor beta, cAMP dependent, testis s
LZ	Plekhm3	pleckstrin homology domain containing, family M, mem
LZ	Plk3	polo-like kinase 3
LZ	Plscr1	phospholipid scramblase 1 (Plscr1)
LZ	Plxnc1	plexin C1
LZ	Pou2f2	POU domain, class 2, transcription factor 2 (Pou2f2)
LZ	Prkcb	protein kinase C, beta
LZ	Ptpre	protein tyrosine phosphatase, receptor type, E (Ptpre)
LZ	Pxk	PX domain containing serine/threonine kinase
LZ	Rabgef1	RAB guanine nucleotide exchange factor (GEF) 1 (Rab
LZ	Rasal3	RAS protein activator like 3
LZ	Rel	reticuloendotheliosis oncogene (Rel)
LZ	Relb	avian reticuloendotheliosis viral (v-rel) oncogene relate
LZ	Rnf122	ring finger protein 122 (Rnf122)
LZ	Ryr2	ryanodine receptor 2, cardiac (Ryr2)
LZ	S1pr3	sphingosine-1-phosphate receptor 3 (S1pr3)
LZ	Samsn1	SAM domain, SH3 domain and nuclear localization sig
LZ	Sdc4	syndecan 4 (Sdc4)
LZ	Sdhaf1	succinate dehydrogenase complex assembly factor 1
LZ	Serpinb1a	serine (or cysteine) peptidase inhibitor, clade B, memb
LZ	Serpinb6b	serine (or cysteine) peptidase inhibitor, clade B, memb
LZ	Sh3bp2	SH3-domain binding protein 2 (Sh3bp2)
LZ	Slamf1	signaling lymphocytic activation molecule family memb
LZ	Slc23a2	solute carrier family 23 (nucleobase transporters), mem
LZ	Slc25a19	solute carrier family 25 (mitochondrial thiamine pyroph
LZ	Slfn2	schlafen 2 (Slfn2)
LZ	Smarca2	SWI/SNF related, matrix associated, actin dependent r
LZ	Snn	stannin (Snn)
LZ	Sorl1	sortilin-related receptor, LDLR class A repeats-containi
LZ	Sp110	Sp110 nuclear body protein
LZ	Spag9	sperm associated antigen 9 (Spag9), transcript variant
LZ	St7	suppression of tumorigenicity 7
LZ	St8sia6	ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransfe
LZ	Swap70	SWA-70 protein
LZ	Syne1	synaptic nuclear envelope 1 (Syne1), transcript variant
LZ	Syngr2	synaptogyrin 2 (Syngr2)
LZ	Tagap	T-cell activation Rho GTPase-activating protein (Tagap
LZ	Tanc2	tetratricopeptide repeat, ankyrin repeat and coiled-coil
LZ	Tank	TRAF family member-associated Nf-kappa B activator
LZ	Tet2	tet methylcytosine dioxygenase 2
LZ	Tgif1	TGFB-induced factor homeobox 1 (Tgif1)

LZ	Tle3	transducin-like enhancer of split 3, homolog of Drosoph
LZ	Tlr1	toll-like receptor 1 (Tlr1)
LZ	Tm6sf1	transmembrane 6 superfamily member 1 (Tm6sf1)
LZ	Tmem123	transmembrane protein 123 (Tmem123)
LZ	Tmf1	TATA element modulatory factor 1 (Tmf1)
LZ	Tnfaip3	tumor necrosis factor, alpha-induced protein 3 (Tnfaip3
LZ	Trim7	tripartite motif-containing 7
LZ	Wdfy2	WD repeat and FYVE domain containing 2 (Wdfy2)
LZ	Wdfy4	WD repeat and FYVE domain containing 4
LZ	Zdhhc23	zinc finger, DHHC domain containing 23 (Zdhhc23)
LZ	Zfp318	zinc finger protein 318 (Zfp318), transcript variant 1
LZ	Zfp36l1	zinc finger protein 36, C3H type-like 1 (Zfp36l1)
LZ	Zfp608	zinc finger protein 608 (Zfp608) XM_001000874 XM_0

*Victora, G.D., *et al.* Germinal center dynamics revealed by multiphoton microscopy wi

ınd (He at al., this manuscript) and total DZ and LZ GC gene lists from Victora et al.*

16P10Rik)

(Abca3), transcript variant 1

member E (Anp32e)

e) (Asf1a)
Drosophila) (Aspm)
ex, beta subunit (Atp5b), nuclear gene encoding mitochondrial protein

-beta-galactosyltransferase, 1 (C1galt1)

l)
script variant 5 (Cdkn3)

lypeptide A) small phosphatase 2 (Ctdsp2)
nal1)
Ertd750e)

nt3)

nr)

:or 5 (Lgr5)

_mo7)
1

y Ki 67 (Mki67)
nd1)
anscript variant 1

se 2
log (S. cerevisiae)

ubunit 3

1)

)

lated) (Rala)

b)

ur (Ip) (Sdhb), nuclear gene encoding mitochondrial protein

er, member 7
egulator of chromatin, subfamily a, member 4 (Smarca4)

us laevis) (Tpx2)
ram2)

variant 1

s 1

ansferase 5
nt1), transcript variant 1

script variant 1
anscript variant 1
)4)

a) (Dip2b)
riant 3 (Dock10)

23143

2a)

ır1)
Gadd45g)

ariant 1
ariant 2

g protein 3
ariant 1

3k1)
Marcks)
kinase family member 4, transcript variant 5 (Mast4)

4C (Ms4a4c)

r in B cells 2, p49/p100
r in B-cells inhibitor, alpha (Nfkbia)

ɑ1)
ıs 1 (Pacsin1)

4 (Pfkfb4)

pecific (Pkib), transcript variant 2
ıber 3 (Plekhm3)

ɔgef1)

d B (Relb)

nals, 1 (Samsn1)

er 1a (Serpinb1a)
er 6b (Serpinb6b)

er 1 (Slamf1)
nber 2 (Slc23a2)
osphate carrier), member 19 (Slc25a19), nuclear gene encoding mitochondrial protein

egulator of chromatin, subfamily a, member 2 (Smarca2), transcript variant 1

ng (Sorl1)

3

erase 6 (St8sia6)

2

)
containing 2 (Tanc2) XM_001000900 XM_001000913 XM_001000922 XM_001004226 XM_001(
(Tank)

ıila E(spl) (Tle3)

:)

01000888 XM_001000902 XM_001000914 XM_993937 XM_993952 XM_993993 XM_994038 X

ith a photoactivatable fluorescent reporter. *Cell* **143**, 592-605 (2010).

)04229 XM_001004235 XM_001004240 XM_903099 XM_903101 XM_903102 XM_911892 XM_

XM_994057 XM_994076

922187 XM_922195 XM_922205 XM_922212 XM_922217 XM_922223 XM_984944

List of Gene Ontology biological process (BP) and cellular compartment (CC) cate

Category	Term
All LZ	
GOTERM_BP_FAT	GO:0001775~cell activation
GOTERM_BP_FAT	GO:0044092~negative regulation of molecular function
GOTERM_BP_FAT	GO:0002520~immune system development
GOTERM_BP_FAT	GO:0042113~B cell activation
GOTERM_BP_FAT	GO:0048534~hemopoietic or lymphoid organ development
GOTERM_BP_FAT	GO:0043086~negative regulation of catalytic activity
GOTERM_BP_FAT	GO:0006955~immune response
GOTERM_CC_FAT	GO:0009897~external side of plasma membrane
GOTERM_BP_FAT	GO:0030098~lymphocyte differentiation
GOTERM_BP_FAT	GO:0030097~hemopoiesis
GOTERM_BP_FAT	GO:0042110~T cell activation
GOTERM_BP_FAT	GO:0030217~T cell differentiation
GOTERM_BP_FAT	GO:0002764~immune response-regulating signal transduction
GOTERM_BP_FAT	GO:0002684~positive regulation of immune system process
GOTERM_BP_FAT	GO:0002521~leukocyte differentiation
GOTERM_BP_FAT	GO:0002460~adaptive immune response based on somatic rec
GOTERM_CC_FAT	GO:0009986~cell surface
GOTERM_BP_FAT	GO:0006874~cellular calcium ion homeostasis
GOTERM_BP_FAT	GO:0007242~intracellular signaling cascade
GOTERM_BP_FAT	GO:0030183~B cell differentiation
GOTERM_BP_FAT	GO:0002757~immune response-activating signal transduction
GOTERM_BP_FAT	GO:0055065~metal ion homeostasis
GOTERM_BP_FAT	GO:0002263~cell activation during immune response
GOTERM_BP_FAT	GO:0002253~activation of immune response

All DZ	
Category	**Term**
GOTERM_BP_FAT	GO:0007049~cell cycle
GOTERM_BP_FAT	GO:0000279~M phase
GOTERM_BP_FAT	GO:0000280~nuclear division
GOTERM_BP_FAT	GO:0048285~organelle fission
GOTERM_CC_FAT	GO:0043232~intracellular non-membrane-bounded organelle
GOTERM_CC_FAT	GO:0005694~chromosome
GOTERM_CC_FAT	GO:0015630~microtubule cytoskeleton
GOTERM_CC_FAT	GO:0000775~chromosome, centromeric region
GOTERM_BP_FAT	GO:0031497~chromatin assembly
GOTERM_BP_FAT	GO:0065004~protein-DNA complex assembly
GOTERM_BP_FAT	GO:0006323~DNA packaging
GOTERM_CC_FAT	GO:0005856~cytoskeleton
GOTERM_BP_FAT	GO:0007059~chromosome segregation
GOTERM_CC_FAT	GO:0032993~protein-DNA complex
GOTERM_BP_FAT	GO:0022900~electron transport chain

GOTERM_BP_FAT	GO:0006334~nucleosome assembly
GOTERM_CC_FAT	GO:0000779~condensed chromosome, centromeric region
GOTERM_CC_FAT	GO:0070469~respiratory chain
GOTERM_BP_FAT	GO:0045454~cell redox homeostasis
GOTERM_BP_FAT	GO:0006333~chromatin assembly or disassembly
GOTERM_BP_FAT	GO:0006091~generation of precursor metabolites and energy
GOTERM_BP_FAT	GO:0065003~macromolecular complex assembly
GOTERM_CC_FAT	GO:0005819~spindle
GOTERM_CC_FAT	GO:0005739~mitochondrion
GOTERM_BP_FAT	GO:0043933~macromolecular complex subunit organization
GOTERM_CC_FAT	GO:0000776~kinetochore

egories	
	Count
	21
	14
	19
	11
	18
	11
	21
	12
	10
	14
	10
	8
	7
	12
	10
	8
	13
	8
	25
	6
	6
	8
	5
	7
	Count
	53
	34
	26
	26
	68
	29
	29
	12
	10
	10
	11
	36
	9
	9
	11

9
8
8
8
10
15
17
9
36
17
7

enriched in light zone (LZ) or dark zone (DZ) of IgG1 GC cells at FDR < 1%

Genes

PTPRC, GPR183, CR2, SWAP70, RELB, TLR1, EVL, CD40, NFKB2, SLAMF1, IFNAR1, B
PTPRC, GABBR1, NFKBIA, NR4A1, PKIB, PXK, PDCD4, FLNA, DDIT3, S1PR3, BCL2A1
GPR183, PTPRC, STAP1, SWAP70, JARID2, RELB, NFKB1, NFKB2, PLSCR1, BCL2A1D,
PTPRC, GPR183, LAT2, CR2, SWAP70, BCL2, POU2F2, BCL11A, BCL3, BANK1, CD40
GPR183, PTPRC, STAP1, JARID2, RELB, NFKB1, NFKB2, PLSCR1, BCL2A1D, BCL2, LC
S1PR3, PTPRC, BCL2A1D, GRM6, GADD45G, GABBR1, NR4A1, PKIB, PXK, PDCD4, FL
CIITA, PTPRC, GPR183, CR2, SWAP70, NCF1, RELB, TLR1, TNFRSF14, NFKB2, SP110,
FCER2A, CD83, PTPRC, CD86, CR2, CD69, APOE, CD22, TNFRSF14, IL2RG, CD40, SL
PTPRC, GPR183, BCL2A1D, BCL2, RELB, GADD45G, POU2F2, BCL11A, LCK, BCL3
GPR183, PTPRC, STAP1, RELB, PLSCR1, BCL2A1D, BCL2, LCK, BCL11A, POU2F2, GA
PTPRC, CD86, BCL2A1D, BCL2, RELB, GADD45G, BCL11A, LCK, BCL3, IFNAR1
PTPRC, BCL2A1D, BCL2, RELB, GADD45G, BCL11A, LCK, BCL3
PTPRC, BCL2A1D, LAT2, LCK, UNC93B1, NFKBIA, CD40
FCER2A, CD83, PTPRC, BCL2A1D, LAT2, CR2, LYST, LCK, UNC93B1, NFKBIA, IL2RG,
PTPRC, GPR183, BCL2A1D, BCL2, RELB, GADD45G, POU2F2, BCL11A, LCK, BCL3
CR2, SWAP70, LYST, RELB, GADD45G, POU2F2, BCL3, NFKB2
FCER2A, PTPRC, CR2, TNFRSF14, CD40, SDC4, SLAMF1, CD83, CD86, APOE, CD69, C
PTPRC, APOE, BCL2, LCK, RYR2, BANK1, ITPR1, PRKCB
PLEKHM3, TLR1, MYO9B, S1PR3, MAP3K1, BCL3, SH2B3, RASA2, ARHGEF3, PTPRC,
PTPRC, GPR183, BCL2, POU2F2, BCL11A, BCL3
PTPRC, BCL2A1D, LAT2, LCK, UNC93B1, NFKBIA
PTPRC, APOE, BCL2, LCK, RYR2, BANK1, ITPR1, PRKCB
GPR183, LAT2, RELB, GADD45G, BCL3
PTPRC, BCL2A1D, LAT2, CR2, LCK, UNC93B1, NFKBIA

Genes

DBF4, PTTG1, CCNE2, CDCA8, RAD21, MYB, CCNA2, ASPM, CDCA3, ANAPC5, RAN, S
NEK2, PTTG1, CEP55, C79407, CDCA8, RAD21, F630043A04RIK, MNS1, CCNA2, BUB3
NEK2, PTTG1, CEP55, C79407, CDCA8, RAD21, F630043A04RIK, CCNA2, ASPM, BUB
NEK2, PTTG1, CEP55, C79407, CDCA8, RAD21, F630043A04RIK, CCNA2, ASPM, BUB
CTNNAL1, GM6682, HMGN2, HP1BP3, TUBB2C, RPS27L, SRP19, HMGN5, AI314180, TC
HMGB2, HMGN2, NEK2, HP1BP3, POLA1, HMGN5, C79407, TOP1, CDCA8, RAD21, CEN
GM6682, NEK2, TUBB2C, CEP55, AI314180, KIF2C, CDCA8, F630043A04RIK, TUBA1A,
CDCA8, MKI67, CENPA, NEK2, SGOL2, F630043A04RIK, NUF2, CENPV, BUB1B, CENPF
HIST1H2BC, CENPA, HP1BP3, H2AFZ, CENPV, HIST1H4C, HIST1H3E, HIST1H3G, ASF
HIST1H2BC, CENPA, HP1BP3, H2AFZ, CENPV, HIST1H4C, HIST1H3E, HIST1H3G, ASF
HIST1H2BC, CENPA, HP1BP3, H2AFZ, CENPV, HIST1H4C, HIST1H3E, HIST1H3G, ASF
CTNNAL1, GM6682, MYL4, NEK2, TUBB2C, AKAP12, CEP55, AI314180, KIF2C, CDCA8,
RAD21, NEK2, SGOL2, F630043A04RIK, NUF2, CENPF, CENPE, PTTG1, BUB3
HIST1H2BC, CENPA, HP1BP3, H2AFZ, POLA1, HIST1H4C, HIST1H3E, HIST1H3G, TCF3
SDHB, UQCR11, NDUFB6, NDUFA8, NDUFB9, NDUFC2, FADS2, TXN1, UQCRFS1, NDU

HIST1H2BC, CENPA, HP1BP3, H2AFZ, HIST1H4C, HIST1H3E, HIST1H3G, ASF1A, SMA
CENPA, SGOL2, F630043A04RIK, NUF2, CENPV, BUB1B, CENPF, CENPE
UQCR11, NDUFB6, NDUFA8, NDUFB9, NDUFC2, UQCRFS1, NDUFS2, NDUFA11
GLRX3, TXNDC11, GCLC, GRXCR1, TXNRD1, TXN1, 2700094K13RIK, PRDX1
HIST1H2BC, CENPA, HP1BP3, H2AFZ, CENPV, HIST1H4C, HIST1H3E, HIST1H3G, ASF
NDUFB6, NDUFA8, NDUFB9, ATP5B, NDUFC2, ATP5F1, FADS2, TXN1, UQCRFS1, NDU
GM6682, HIST1H2BC, HP1BP3, TUBB2C, EIF2A, MBD2, CENPA, H2AFZ, CENPV, HIST1
NEK2, F630043A04RIK, TPX2, CENPV, CALM3, CENPF, CENPE, RACGAP1, CALM2, AS
NDUFB6, ADHFE1, NDUFB9, ATP5B, TXN1, RRM2B, UQCRFS1, PRDX1, COX5B, DAZAP
GM6682, HIST1H2BC, HP1BP3, TUBB2C, EIF2A, MBD2, CENPA, H2AFZ, CENPV, HIST1
CENPA, F630043A04RIK, NUF2, CENPV, BUB1B, CENPF, CENPE

Fold Enrichment	PValue	Benjamini	FDR
7.1601927130382	1.13E-11	1.66E-08	1.87E-08
8.8959970071081	5.32E-09	1.96E-06	8.82E-06
5.4022180372463	1.29E-08	3.80E-06	2.13E-05
11.828743273188	2.60E-08	6.39E-06	4.30E-05
5.3728746540134	3.79E-08	8.00E-06	6.29E-05
9.1350690624618	3.14E-07	5.79E-05	5.20E-04
3.7397184870646	7.48E-07	1.23E-04	0.0012404802
5.5180935569285	1.05E-05	0.001813961106	0.0128405174
7.3575915096383	8.25E-06	0.001217384523	0.0136766403
4.6783729280409	9.02E-06	0.001210940187	0.0149645213
7.23073648361	9.51E-06	0.001169423152	0.0157648421
8.829109811566	3.17E-05	0.003593455338	0.0525339247
11.291073124406	3.27E-05	0.003444333925	0.0542227304
4.8860122258181	3.41E-05	0.003352396409	0.0565418045
5.9067988175969	4.79E-05	0.004415323893	0.0794670957
7.9882422104644	6.06E-05	0.005255605814	0.1005342214
4.0375558867362	8.50E-05	0.007325027905	0.1039434674
7.3737620404287	1.01E-04	0.008264626752	0.1675904602
2.2917088308709	1.93E-04	0.013492539258	0.3198018379
10.940418679549	2.03E-04	0.013550845105	0.3364600966
10.484567901235	2.49E-04	0.01586751042	0.4122165463
6.3303051479152	2.63E-04	0.016032430937	0.4345972116
13.52847471127	4.66E-04	0.027135088731	0.7692585852
6.8271604938272	5.42E-04	0.030353573851	0.8958258505

Fold Enrichment	PValue	Benjamini	FDR
5.6940313258537	3.44E-25	4.66E-22	5.65E-22
7.8863795428552	3.33E-20	9.04E-18	5.47E-17
8.9826595474193	9.13E-17	1.88E-14	1.78E-13
8.6634787513181	2.18E-16	3.34E-14	3.66E-13
2.5175043820171	8.81E-14	2.23E-11	1.15E-10
5.4505772005772	3.90E-13	4.94E-11	5.08E-10
4.5784848484848	2.62E-11	2.21E-09	3.41E-08
7.6805896805897	4.15E-07	1.50E-05	5.40E-04
8.7523349436393	1.88E-06	2.54E-04	0.0030823497
8.6371726417493	2.10E-06	2.59E-04	0.003450971
7.1491844836658	2.98E-06	3.37E-04	0.004898308
2.2795333009237	4.68E-06	1.31E-04	0.006086881
9.2309782608696	5.21E-06	5.43E-04	0.0085435598
8.5254545454545	9.52E-06	2.41E-04	0.0123941489
6.4470324361629	7.61E-06	6.87E-04	0.0124867458

8.0929124478856	1.41E-05	0.001120888984	0.0230887646
9.4727272727273	1.93E-05	4.43E-04	0.0250982979
8.7440559440559	3.28E-05	5.92E-04	0.0426588037
8.4700015583606	4.03E-05	0.002599472493	0.0661792223
6.0222488144307	4.09E-05	0.00251616773	0.0671056777
3.7725581653618	4.46E-05	0.002624898851	0.0731893431
3.3015464654261	5.79E-05	0.00326490597	0.0950126117
5.8661384487073	1.43E-04	0.002012283509	0.1863497706
1.9346719845963	1.47E-04	0.001956838829	0.1912727407
3.0406613223815	1.52E-04	0.007579001966	0.2484748587
8.0212609970674	2.22E-04	0.002544766089	0.2879602253