

**Supplementary Table 1. Altered genes detected by array comparative genomic hybridization (CGH) and their copy number variation (CNV information)**

CNV	chr	Loci	Gene	Name	Information a/w disorder (NCBI)	CNV database
Gain	1	p36.13	CROCC	ciliary rootlet coiled-coil, rootletin	ND	1 loss/30 control
Gain	1	q21.3	LCE3C	late cornified envelope 3C	Atopic dermatitis, RA, Psoriasis	1 control loss
Gain	1	q21.3	LCE1E	late cornified envelope 1E	ND	1 control loss
Gain	1	q21.3	LCE1D	late cornified envelope 1D	ND	1 control loss
Loss	3	q29	MIR570	microRNA 570	ND	1 control loss
Loss	3	q29	MUC20	mucin 20, cell surface associated	nephropathy	1 control gain
Loss	4	q13.2	UGT2B17	UDP glucuronosyltransferase 2 family, polypeptide B17	osteoporosis, prostate cancer	409 gain, 318 loss/1184 control
Loss	4	q13.2	UGT2B15	UDP glucuronosyltransferase 2 family, polypeptide B15	prostate ccancer	1 control loss
Gain	5	q35.3	BTNL3	butyrophilin-like 3	ND	1 control loss
Loss	6	p21.32	HLA-DRB5	major histocompatibility complex, class II, DR beta 5	multiple sclerosis	317 gain,loss/1184 control
Loss	8	p11.23	FGFR1	fibroblast growth factor receptor 1	squamous lung cancer, bladder cancer, MPN, leukemia/lymphoma, Pfeiffer syndrome, Jackson-Weiss syndrome, Antley-Bixler syndrome, osteoglophonic dysplasia, Kallmann syndrome 2	1 gain/776 control
Loss	8	p11.23	C8orf86	.	ND.	1 control gain
Loss	8	p11.23	RNF5P1	ring finger protein 5 pseudogene 1	ND	35 gain,loss/270 control
Loss	8	p11.23	TACC1	transforming, acidic coiled-coil containing protein 1	breast cancer	2 loss/450 control
Loss	8	p11.23	PLEKHA2	pleckstrin homology domain containing, family A (phosphoinositide binding specific) member 2	leukemia	6 loss/2026 healthy control

Loss	8	p11.23	HTRA4	HtrA serine peptidase 4	ND	No CNV
Loss	8	p11.23	TM2D2	TM2 domain containing 2	ND.	1 control loss
Loss	8	p11.23	ADAM9	ADAM metallopeptidase domain 9	melanoma, breast cancer prostate cancer, HCC	1 control loss
Loss	8	p11.23	ADAM32	ADAM metallopeptidase domain 32	ND	1 gain/30 control
Loss	8	p11.22	ADAM5P	ADAM metallopeptidase domain 5, pseudogene	ND	480 loss/1184 control
Loss	8	p11.22	ADAM3A	ADAM metallopeptidase domain 3A	ND	480 loss/1184 control
Loss	11	p15.4	OR52N5	olfactory receptor, family 52, subfamily N, member 5	ND	1 control loss
Loss	11	q11	OR4C11	olfactory receptor, family 4, subfamily C, member 11	ND	1 control loss
Loss	11	q11	OR4P4	olfactory receptor, family 4, subfamily P, member 4	ND	1 loss/20 control
Loss	11	q11	OR4S2	olfactory receptor, family 4, subfamily S, member 2	ND	1 control loss
Loss	11	q11	OR4C6	olfactory receptor, family 4, subfamily C, member 6	ND	1 control loss
Gain	12	q24.31	GPR109A	G protein-coupled receptor 109A	ND	1 control loss
Gain	12	q24.31	GPR109B	G protein-coupled receptor 109B	schizophrenia	16 gain/450 control
Loss	13	q12.11	ZMYM2	zinc finger, MYM-type 2	MPN, T-cell lymphoma	1 control loss
Loss	13	q12.11	GJA3	gap junction protein, alpha 3, 46kDa	cataract	2 loss/2026 healthy control
Loss	13	q12.11	GJB2	gap junction protein, beta 2, 26kDa	hearing loss	2 gain/90 control
Loss	13	q12.11	GJB6	gap junction protein, beta 6, 30kDa	gastric cancer, epidermal tumor	1 loss/776 control
Loss	13	q12.11	CRYL1	crystallin, lambda 1	ND	1 loss/112 control
Loss	13	q12.11	IFT88	intraflagellar transport 88 homolog (Chlamydomonas)	HCC	1 gain/30 control
Loss	13	q12.11	IL17D	interleukin 17D	ND	No CNV

Loss	13	q12.11	N6AMT2	N-6 adenine-specific DNA methyltransferase 2 (putative)	ND	No CNV
Loss	13	q12.11	XPO4	exportin 4	ND	2 gain/39 control
Loss	13	q12.11	LATS2	LATS, large tumor suppressor, homolog 2 (Drosophila)	nasopharyngeal cancer, breast cancer	2 gain/30 control
Gain	14	q11.2	DAD1	defender against cell death 1	thyroid cancer, esophageal adenocarcinoma	1 gain/272 control
Gain	14	q11.2	ABHD4	abhydrolase domain containing 4	ND	No CNV
Gain	15	q13.3	FAM7A3	family with sequence similarity 7, member A3	ND	1 gain/20 control
Gain	15	q13.3	FAM7A2	family with sequence similarity 7, member A2	ND	1 gain/20 control
Gain	15	q13.3	FAM7A1	family with sequence similarity 7, member A1	ND	1 gain/20 control
Gain	15	q15.3	CASC4	cancer susceptibility candidate 4	soft tissue sarcoma	no CNV
Loss	16	p13.11	PDXDC1	pyridoxal-dependent decarboxylase domain containing 1	ND	1 control gain
Gain	17	q12	CCL4	chemokine (C-C motif) ligand 4	cystic fibrosis	1 control loss
Loss	22	q11.23	LOC391322	.	ND	630 gain, loss/1184 control
Loss	22	q11.23	GSTT1	glutathione S-transferase theta 1	Hirschsprung disease, head and neck cancer, Hodgkin lymphoma	630 gain, loss/1184 control
Loss	22	q11.23	GSTTP2	glutathione S-transferase theta pseudogene 2	ND	630 gain, loss/1184 control
Gain	X	q28	OPN1MW	opsin 1 (cone pigments), medium-wave-sensitive	blindness	1 loss control
Gain	X	q28	OPN1MW2	opsin 1 (cone pigments), medium-wave-sensitive 2	ND	1 loss control
Gain	X	q28	TEX28	testis expressed 28	ND	1 loss control

ND, not described