

Copy Number Variable MicroRNAs in Schizophrenia and Their Neurodevelopmental Gene Targets

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Supplemental Methods

Comparison Sample for Formal Analyses

To optimize our analyses, we used an independent Canadian comparison sample from the Ontario Population Genomics Platform (OPGP) genetic epidemiologic project comprising 415 unrelated adults of European ancestry (1, 2). The OPGP comparison subjects are independent of the 2,357 population-based copy number variant (CNV) adjudication controls described below. The OPGP was conceived as an opportunity to establish a collection of fully consented, Ontario-based population control DNA samples, as a resource for researchers in Ontario and elsewhere. The OPGP was constructed in two phases. The first phase involved collaborations with the Ontario Familial Breast Cancer Registry (OFBCR) (3) and the Ontario Familial Colorectal Cancer Registry (OFCCR) (4). Population controls from the OFBCR and OFCCR that had completed the study questionnaires and provided a blood sample were eligible to participate as controls in the OPGP. The second phase involved collaboration with the Institute of Social Research at York University (Toronto, Ontario, Canada). A database of information on individuals from the population of Ontario ($n = 14,000$) was obtained, based on a random sample of households across Ontario identified initially on the basis of telephone directory listings. These households were contacted by means of a mailed letter and follow-up telephone calls were made by a trained interviewer who, after establishing eligibility within the household, randomly chose one person as the eligible control. Individuals were eligible if they were 20–79 years of age and resided in Ontario. In both the phases, subjects were re-consented for OPGP, and surveyed for comprehensive demographic and health information. Blood samples were collected and sent via courier to The Centre for Applied Genomics (TCAG) Biobanking Facility for transformation, DNA preparation and distribution. The total OPGP collection consists of samples

from 1,134 males (42%) and 1,556 females (58%), ranging in age from 20 to 82 years. This study uses data from 415 of these OPGP samples of European ancestry that were genotyped on the Affymetrix 6.0 platform. To minimize laboratory-related artefacts (5, 6), identical experimental and analytical protocols for array genotyping and CNV analyses were followed at the same facility for the OPGP comparison and schizophrenia case samples (see below).

Genotyping and CNV Determination

High-quality genomic DNA was genotyped using the Affymetrix® Genome-Wide Human SNP Array 6.0 at TCAG in Toronto. Arrays meeting Affymetrix's recommended quality control guideline of contrast QC > 0.4 were used for further analysis as outlined below.

To accurately estimate ancestry, genotypes of the schizophrenia cases from 1,120 genome-wide unlinked single nucleotide polymorphisms (SNPs) were clustered by the program STRUCTURE (7) together with genotypes from 270 HapMap samples, which were used as references of known ancestry during clustering. Ancestries were assigned with a threshold of coefficient of ancestry > 0.9. For this miRNA-CNV study, we considered only schizophrenia cases of European ancestry.

Recent findings of unexpected relatedness in widely used databases (8) prompted a systematic analysis of genetic relatedness to ensure that all cases and comparison individuals were unrelated to each other. Pair-wise identity by descent (IBD) was calculated for every pair of cases from the genotypes of 934,968 SNP probes on the Affymetrix 6.0 platform, using the PLINK toolset (9). Those pairs of samples with PI_HAT values [defined as $P(\text{IBD} = 2) + 0.5 \times P(\text{IBD} = 1)$] > 0.1, corresponding to first cousins or closer, were further investigated for relatedness and only one sample from each pair was used in the final dataset. The results using

the initial samples tested showed that (i) four subjects in the schizophrenia group were related to other probands (subsequently confirmed by further pedigree data), and (ii) one male OPGP comparison subject was related to another comparison subject. Data for these five individuals were therefore excluded as a preliminary step in compiling the samples of 420 cases of European ancestry and 415 OPGP comparison subjects. Cases and comparison subjects showed a similar pair-wise within-sample background relatedness (median PI_HAT values of 0.032 and 0.046, respectively, within pre-established ranges of 0.031–0.099).

Genome-wide CNVs were detected using an established multiple-algorithm approach to maximize sensitivity and specificity of CNV calling (1, 2, 10). Briefly, for each subject we defined ‘stringent’ CNV calls as those detected by at least two of three CNV calling algorithms: Birdsuite (11), iPattern (5), and Affymetrix Genotyping Console (GTC), and spanning at least 10 kb in length and five or more consecutive array probes. Of note, our method only implements the GTC algorithm that is responsible for detecting rare variation, and thus we do not use the canary algorithm in GTC that is used for copy number polymorphisms. In our experience, detection of a CNV with two different programs, even when these two methods employ similar underlying algorithms, helps decrease the false positive rate substantially (5). Arrays with number of CNVs exceeding three times the standard deviation from the mean number of CNVs across the dataset were excluded (10).

All subsequent analyses focused on these stringent CNVs, which in our past experience and in this study (see below) have very high positive validation rates by independent methods, e.g., quantitative polymerase chain reaction (qPCR) (1, 10, 12, 13). Each CNV identified in the schizophrenia case and OPGP comparison samples was then adjudicated for rarity by comparison to those identified, using an identical microarray platform and CNV analysis

strategy, in two large population-based control cohorts comprising 2,357 individuals of European ancestry from Ontario and Germany (1, 10). We used a conservative definition of ‘rare’ CNVs: those present in <0.1% of the population controls (1).

Experimental Validation of CNVs

Confirmatory studies of CNVs used Stratagene SYBR® Green based qPCR. Each qPCR assay was performed simultaneously in triplicate for both the test region and a control region of known copy number 2 on chromosome 7 (14). The ratio of the average value for the test region to that for the control region had to be >1.3 or <0.7 in order for the CNV to be confirmed as a duplication or deletion, respectively. In addition, the standard error of the ratio had to be <1.0 on the same scale in order for the assay to be considered reliable. We validated 58 (100.0%) of 58 CNVs tested, i.e., all 58 assays met both of these criteria for CNV confirmation. The validated CNVs spanned a range of sizes, and included 17 that were <50 kb. Post-study molecular genetic results from clinical laboratories confirmed a further 11 CNVs. All clinically significant variants were confirmed in a CLIA-approved laboratory and returned to patients and their families.

Formulae for Logistic Regression Models

Schizophrenia case status (individual) ~ Total collective size (in base pairs) of all rare CNVs in the individual + Presence of a rare CNV overlapping a miRNA in the individual (binary indicator variable).

Schizophrenia case status (individual) ~ Total number of rare CNVs in the individual + Presence of a rare CNV overlapping a miRNA in the individual (binary indicator variable).

Schizophrenia case status (CNV) ~ Rare CNV size (in base pairs) + Presence of a miRNA within the genomic extent of the rare CNV (binary indicator variable).

[All statistical analyses were performed using R 3.0.1 software.]

Table S1. Rare copy number variant (CNV) miRNA burden in schizophrenia

	Schizophrenia Case CNVs						Analysis					
							OPGP Comparison CNVs				Uncorrected	
	<i>n</i> Overlapping miRNAs	<i>n</i> Total	(%)	<i>n</i> Overlapping miRNAs	<i>n</i> Total	(%)	<i>p</i>	OR	(95% CI)	<i>p</i>	OR	(95% CI)
All Rare CNVs ^b (>10 kb)	67	1052	(6.37)	25	954	(2.62)	<0.0001	2.53	(1.58) (4.04)	0.0189	1.83	(1.12) (3.07)
Loss only	24	591	(4.06)	8	556	(1.44)	0.0070	2.90	(1.29) (6.51)	0.0783	2.19	(0.94) (5.53)
Gain only	43	461	(9.33)	17	398	(4.27)	0.0037	2.31	(1.29) (4.11)	0.1071	1.66	(0.91) (3.14)
Very rare ^c only	53	740	(7.16)	15	593	(2.53)	0.0001	2.97	(1.66) (5.33)	0.0150	2.17	(1.19) (4.16)
Small Rare CNVs ^b (<500 kb only)	30	842	(3.56)	19	885	(2.15)	0.0765	1.68	(0.94) (3.02)	0.0520	1.80	(1.00) (3.32)
Very rare ^c only	22	586	(3.75)	12	547	(2.19)	0.1239	1.74	(0.85) (3.55)	0.0744	1.94	(0.95) (4.13)

n overlapping miRNAs, number of rare autosomal CNVs overlapping a miRNA; *n* total, total number of rare autosomal CNVs; (Uncorrected) *p*, two-sided Pearson chi-square *p*-value; (Corrected) *p*, two-sided Wald *p*-value; OR, odds ratio; 95% CI, 95% confidence interval of odds ratio.

^aCorrected = Corrected for CNV size through a logistic regression model including rare CNV size and presence of a miRNA within the genomic extent of the CNV as predictor variables.

^bRare = CNVs with <0.1% prevalence in 2,357 population controls of European ancestry (used to adjudicate both schizophrenia case and OPGP comparison subjects).

^cVery rare = CNVs with 0% prevalence in 2,357 population controls.

Significant results (*p* < 0.05) are shown in bold font.

Table S2. MiRNAs overlapped by rare copy number variants (CNVs) in schizophrenia case and OPGP comparison subjects

CNVs that Overlap miRNAs								miRNA Characteristics			
Cytoband	Chr	Start	Size (bp)	Gain/Loss	Very Rare	Clinical Significance ^a	# of miRNAs Overlapped	miRNA Name	miRNA ID	Recurrent miRNA	Has Predicted Targets ^b
Schizophrenia Cases											
9p24.1,9p24.2	9	4,527,834	486,659	Loss	●	-	1	hsa-miR-101-3p	1		●
9q21.11,9q21.12	9	72,107,555	964,557	Loss	●	VUS	2	hsa-miR-204-3p, -5p	2, 3		●
15q13.2,15q13.3	15	28,608,929	1,690,584	Loss	●	Pathogenic	2	hsa-miR-211-3p, -5p	4, 5		●
4q25,4q26	4	113,634,704	783,442	Gain	●	VUS	12	hsa-miR-302a-3p, -5p	6, 7		●
4q25,4q26	4	113,634,704	783,442	Gain	●	VUS	12	hsa-miR-302b-3p, -5p	8, 9		●
4q25,4q26	4	113,634,704	783,442	Gain	●	VUS	12	hsa-miR-302c-3p, -5p	10, 11		●
4q25,4q26	4	113,634,704	783,442	Gain	●	VUS	12	hsa-miR-302d-3p, -5p	12, 13		●
17q25.3	17	76,591,190	155,319	Gain	●	-	7	hsa-miR-338-3p, -5p	14, 15		●
4q25,4q26	4	113,634,704	783,442	Gain	●	VUS	12	hsa-miR-367-3p, -5p	16, 17		●
10q26.3	10	132,630,798	33,495	Loss	●	-	1	hsa-miR-378c	18		●
16p13.11	16	15,032,942	1,388,198	Gain		VUS	10	hsa-miR-484	19	●	●
16p13.11	16	14,805,302	1,498,712	Gain		VUS	13	hsa-miR-484	19		●
6q16.2,6q16.3	6	98,969,135	1,408,033	Gain	●	VUS	1	hsa-miR-548ai	20		●
13q34	13	113,835,690	228,142	Gain	●	-	3	hsa-miR-548ar-3p, -5p	21, 22		
4p16.1	4	9,088,444	100,667	Loss	●	-	1	hsa-miR-548i	23		●
1q22	1	153,569,442	260,541	Gain	●	-	1	hsa-miR-555	24		
3q13.31	3	115,308,450	2,062,410	Loss	●	Pathogenic	3	hsa-miR-568	25		●
6p12.3,6p21.1	6	45,129,193	298,662	Loss	●	-	1	hsa-miR-586	26		●
8p23.3	8	1,667,092	91,079	Gain	●	-	2	hsa-miR-596	27		●
12q21.31	12	79,679,461	1,397,367	Loss	●	VUS	4	hsa-miR-617	28	●	●
12q21.31	12	79,255,527	568,008	Gain	●	VUS	1	hsa-miR-617	28		●
12q21.31	12	79,679,461	1,397,367	Loss	●	VUS	4	hsa-miR-618	29		●
13q31.3	13	89,662,891	36,164	Loss	●	-	1	hsa-miR-622	30		●

CNVs that Overlap miRNAs								miRNA Characteristics			
Cytoband	Chr	Start	Size (bp)	Gain/Loss	Very Rare	Clinical Significance ^a	# of miRNAs Overlapped	miRNA Name	miRNA ID	Recurrent miRNA	Has Predicted Targets ^b
17q24.2	17	61,941,341	277,949	Loss	●	-	1	hsa-miR-634	31		●
17q25.3	17	76,591,190	155,319	Gain	●	-	7	hsa-miR-657	32		●
16p13.3	16	725,280	113,050	Gain		-	1	hsa-miR-662	33		●
9p21.1	9	28,764,737	311,232	Loss	●	-	4	hsa-miR-873-3p, -5p	34, 35		●
9p21.1	9	28,764,737	311,232	Loss	●	-	4	hsa-miR-876-3p, -5p	36, 37		●
3q29	3	198,870,678	408,070	Gain		-	1	hsa-miR-922	38		●
17p11.2	17	19,070,824	130,990	Gain		-	2	hsa-miR-1180-3p, -5p	39, 40		●
19p13.3	19	2,015,619	180,285	Loss	●	-	4	hsa-miR-1227-3p, -5p	41, 42		●
4q25,4q26	4	113,634,704	783,442	Gain	●	VUS	12	hsa-miR-1243	43		●
17q25.3	17	76,591,190	155,319	Gain	●	-	7	hsa-miR-1250-3p, -5p	44, 45		
17p13.3	17	2,344,518	369,203	Gain	●	-	3	hsa-miR-1253	46		●
3q26.1	3	165,337,963	63,113	Gain	●	-	1	hsa-miR-1263	47		●
4q34.3,4q35.1	4	179,878,817	4,343,697	Gain	●	VUS	1	hsa-miR-1305	48		●
8p23.1	8	10,629,211	211,817	Gain		-	1	hsa-miR-1322	49		●
16p13.11	16	14,805,302	1,498,712	Gain		VUS	13	hsa-miR-1972	50		●
17q25.3	17	76,591,190	155,319	Gain	●	-	7	hsa-miR-3065-3p, -5p	51, 52		●
4p16.1	4	9,480,098	283,217	Gain		-	1	hsa-miR-3138	53		●
16p13.11	16	15,032,942	1,388,198	Gain		VUS	10	hsa-miR-3179	54	●	●
16p13.11	16	14,805,302	1,498,712	Gain		VUS	13	hsa-miR-3179	54		●
16p13.11	16	15,032,942	1,388,198	Gain		VUS	10	hsa-miR-3180 ^c	55	●	●
16p13.11	16	14,805,302	1,498,712	Gain		VUS	13	hsa-miR-3180 ^c	55		●
16p13.11	16	15,032,942	1,388,198	Gain		VUS	10	hsa-miR-3180-3p, -5p ^c	56, 57	●	●
16p13.11	16	14,805,302	1,498,712	Gain		VUS	13	hsa-miR-3180-3p, -5p ^c	56, 57		●
22q12.1	22	25,696,811	1,304,432	Loss	●	VUS	1	hsa-miR-3199	58		●
16p13.11	16	15,032,942	1,388,198	Gain		VUS	10	hsa-miR-3670	59	●	●
16p13.11	16	14,805,302	1,498,712	Gain		VUS	13	hsa-miR-3670	59		●

CNVs that Overlap miRNAs								miRNA Characteristics			
Cytoband	Chr	Start	Size (bp)	Gain/Loss	Very Rare	Clinical Significance ^a	# of miRNAs Overlapped	miRNA Name	miRNA ID	Recurrent miRNA	Has Predicted Targets ^b
8p23.3	8	1,667,092	91,079	Gain	●	-	2	hsa-miR-3674	60		●
16p11.2	16	29,474,810	659,635	Gain	●	Pathogenic	2	hsa-miR-3680-3p, -5p	61, 62	●	
16p11.2	16	29,474,810	624,599	Gain	●	Pathogenic	2	hsa-miR-3680-3p, -5p	61, 62		
16p11.2	16	29,474,810	659,635	Gain	●	Pathogenic	2	hsa-miR-3680-3p, -5p	61, 62		
16p11.2	16	29,474,810	624,599	Gain	●	Pathogenic	2	hsa-miR-3680-3p, -5p	61, 62		
1p36.31	1	6,362,540	90,237	Loss	●	-	1	hsa-miR-4252	63		●
3p21.31	3	49,211,200	83,864	Loss	●	-	1	hsa-miR-4271	64		●
10q11.22,10q11.23	10	45,905,767	5,423,684	Gain	●	Pathogenic	1	hsa-miR-4294	65		●
1q43	1	235,349,594	726,228	Gain	●	VUS	1	hsa-miR-4428	66		●
2q13	2	111,105,101	1,727,363	Gain	●	Pathogenic	2	hsa-miR-4435	67	●	●
2q13	2	111,105,101	1,727,363	Loss	●	Pathogenic	2	hsa-miR-4435	67		●
2q13	2	111,105,101	1,727,363	Gain	●	Pathogenic	2	hsa-miR-4435	67		●
9p13.2,9p13.3	9	36,173,229	862,436	Loss	●	VUS	3	hsa-miR-4475	68		●
9p13.2,9p13.3	9	36,173,229	862,436	Loss	●	VUS	3	hsa-miR-4476	69		●
13q12.11	13	19,694,803	314,310	Loss		-	1	hsa-miR-4499	70		●
13q34	13	113,835,690	228,142	Gain	●	-	3	hsa-miR-4502	71		●
14q32.33	14	105,268,160	652,562	Loss		Benign	4	hsa-miR-4507	72	●	
14q32.33	14	105,265,522	894,996	Loss		Benign	4	hsa-miR-4507	72		
15q11-15q13	15	21,192,955	5,015,049	Gain	●	Pathogenic	3	hsa-miR-4508	73	●	
15q11-15q13	15	21,192,955	5,680,224	Gain	●	Pathogenic	4	hsa-miR-4508	73		
15q11-15q13	15	20,224,763	6,498,447	Gain	●	Pathogenic	4	hsa-miR-4508	73		
15q11-15q13	15	21,192,955	5,680,224	Gain	●	Pathogenic	4	hsa-miR-4509	74	●	●
15q11-15q13	15	20,224,763	6,498,447	Gain	●	Pathogenic	4	hsa-miR-4509	74		●
16p11.2	16	28,864,929	68,551	Gain	●	-	1	hsa-miR-4517	75		●
14q32.33	14	105,268,160	652,562	Loss		Benign	4	hsa-miR-4537	76	●	
14q32.33	14	105,265,522	894,996	Loss		Benign	4	hsa-miR-4537	76		

CNVs that Overlap miRNAs								miRNA Characteristics			
Cytoband	Chr	Start	Size (bp)	Gain/Loss	Very Rare	Clinical Significance ^a	# of miRNAs Overlapped	miRNA Name	miRNA ID	Recurrent miRNA	Has Predicted Targets ^b
14q32.33	14	105,268,160	652,562	Loss		Benign	4	hsa-miR-4538	77	●	●
14q32.33	14	105,265,522	894,996	Loss		Benign	4	hsa-miR-4538	77		●
14q32.33	14	105,268,160	652,562	Loss		Benign	4	hsa-miR-4539	78	●	●
14q32.33	14	105,265,522	894,996	Loss		Benign	4	hsa-miR-4539	78		●
9p13.2,9p13.3	9	36,173,229	862,436	Loss	●	VUS	3	hsa-miR-4540	79		●
1q42.13	1	226,673,588	109,976	Gain	●	-	2	hsa-miR-4666a-3p, -5p	80, 81		
12q21.31	12	79,679,461	1,397,367	Loss	●	VUS	4	hsa-miR-4699-3p, -5p	82, 83		●
15q11-15q13	15	21,192,955	5,015,049	Gain	●	Pathogenic	3	hsa-miR-4715-3p, -5p	84, 85	●	●
15q11-15q13	15	21,192,955	5,680,224	Gain	●	Pathogenic	4	hsa-miR-4715-3p, -5p	84, 85		●
15q11-15q13	15	20,224,763	6,498,447	Gain	●	Pathogenic	4	hsa-miR-4715-3p, -5p	84, 85		●
16p11.2	16	28,731,428	48,040	Gain	●	-	1	hsa-miR-4721	86		●
19q13.42	19	59,423,798	115,602	Gain		-	1	hsa-miR-4752	87	●	●
19q13.42	19	59,414,087	125,313	Gain		-	1	hsa-miR-4752	87		●
2q13	2	111,105,101	1,727,363	Gain	●	Pathogenic	2	hsa-miR-4771 ^d	88	●	●
2q13	2	111,105,101	1,727,363	Loss	●	Pathogenic	2	hsa-miR-4771 ^d	88		●
2q13	2	111,105,101	1,727,363	Gain	●	Pathogenic	2	hsa-miR-4771 ^d	88		●
2p11.2	2	86,959,387	373,976	Loss	●	-	1	hsa-miR-4771 ^d	88		●
3p11.2	3	87,330,448	27,759	Gain	●	-	2	hsa-miR-4795-3p, -5p	89, 90		●
3q13.31	3	115,308,450	2,062,410	Loss	●	Pathogenic	3	hsa-miR-4796-3p, -5p	91, 92		●
1q21.1	1	144,643,825	1,653,983	Gain	●	Pathogenic	1	hsa-miR-5087	93	●	
1q21.1	1	144,472,163	1,839,252	Gain	●	Pathogenic	1	hsa-miR-5087	93		
14q32.33	14	106,325,131	31,352	Gain		-	2	hsa-miR-5195-3p, -5p	94, 95		
18q12.2,18q12.3	18	35,467,011	47,425	Loss	●	-	2	hsa-miR-5583-3p, -5p	96, 97		
10p15.1	10	4,018,881	155,755	Gain	●	-	1	hsa-miR-6078	98		
4q33,4q34.1	4	171,556,613	2,693,129	Loss	●	VUS	1	hsa-miR-6082	99		
16p13.11	16	15,032,942	1,388,198	Gain		VUS	10	hsa-miR-6506-3p, -5p	100, 101	●	

CNVs that Overlap miRNAs							miRNA Characteristics				
Cytoband	Chr	Start	Size (bp)	Gain/Loss	Very Rare	Clinical Significance ^a	# of miRNAs Overlapped	miRNA Name	miRNA ID	Recurrent miRNA	Has Predicted Targets ^b
16p13.11	16	14,805,302	1,498,712	Gain		VUS	13	hsa-miR-6506-3p, -5p	100, 101		
16p13.11	16	15,032,942	1,388,198	Gain		VUS	10	hsa-miR-6511a-3p, -5p	102, 103	●	
16p13.11	16	14,805,302	1,498,712	Gain		VUS	13	hsa-miR-6511a-3p, -5p	102, 103		
1q21.1	1	143,677,127	826,295	Gain		VUS	2	hsa-miR-6736-3p, -5p	104, 105		
1q42.13	1	226,634,235	54,736	Gain	●	-	2	hsa-miR-6742-3p, -5p	106, 107		
11p15.5	11	196,767	70,333	Gain	●	-	2	hsa-miR-6743-3p, -5p	108, 109		
16p13.11	16	14,805,302	1,498,712	Gain		VUS	13	hsa-miR-6770-3p, -5p	110, 111		
17p13.3	17	2,344,518	369,203	Gain	●	-	3	hsa-miR-6776-3p, -5p	112, 113		
19p13.3	19	2,015,619	180,285	Loss	●	-	4	hsa-miR-6789-3p, -5p	114, 115		
3q29	3	196,942,560	207,524	Gain	●	-	2	hsa-miR-6829-3p, -5p	116, 117		
20q12	20	39,196,466	76,741	Gain	●	-	2	hsa-miR-6871-3p, -5p	118, 119		
2q22.1	2	139,898,997	1,322,193	Loss	●	VUS	2	hsa-miR-7157-3p, -5p	120, 121		
4q25,4q26	4	113,634,704	783,442	Gain	●	VUS	12	hsa-miR-8082	122		
OPGP Comparison Subjects											
13q14.3	13	49,492,414	859,795	Loss		VUS	4	hsa-miR-15a-3p, -5p	1, 2		●
13q14.3	13	49,492,414	859,795	Loss		VUS	4	hsa-miR-16-1-3p	3		
13q14.3	13	49,492,414	859,795	Loss		VUS	4	hsa-miR-16-5p	4		●
1p36.32	1	3,273,162	229,215	Gain	●	-	1	hsa-miR-551a	5		●
22q11.21	22	16,783,629	92,319	Gain	●	-	1	hsa-miR-648	6		●
22q11.22	22	21,279,648	273,586	Loss		-	1	hsa-miR-650	7		●
16q24.1	16	84,327,816	21,586	Loss		-	2	hsa-miR-1910-3p, -5p	8, 9		●
4q26	4	117,070,336	916,902	Gain	●	VUS	1	hsa-miR-1973	10		●
13q12.12	13	22,404,072	1,430,916	Loss		VUS	2	hsa-miR-2276-3p, -5p	11, 12		●
14q12	14	27,170,503	206,013	Gain	●	-	1	hsa-miR-3171	13		
17p13.3	17	659,882	395,644	Loss	●	-	1	hsa-miR-3183	14		●

CNVs that Overlap miRNAs								miRNA Characteristics			
Cytoband	Chr	Start	Size (bp)	Gain/Loss	Very Rare	Clinical Significance ^a	# of miRNAs Overlapped	miRNA Name	miRNA ID	Recurrent miRNA	Has Predicted Targets ^b
22q13.32,22q13.33	22	48,117,741	353,995	Gain		-	2	hsa-miR-3667-3p, -5p	15, 16		●
1p36.32	1	2,777,567	336,449	Gain		-	1	hsa-miR-4251	17		●
4p15.1	4	28,348,262	126,511	Loss	●	-	1	hsa-miR-4275	18		●
10q26.3	10	130,363,010	1,253,721	Gain	●	VUS	1	hsa-miR-4297	19		●
1p36.11	1	25,180,271	415,567	Gain		-	1	hsa-miR-4425	20		●
6q24.1	6	141,022,503	82,261	Gain	●	-	1	hsa-miR-4465	21		
22q13.32	22	47,529,950	451,615	Gain	●	-	1	hsa-miR-4535	22		●
5p15.33	5	1,055,489	218,773	Gain	●	-	1	hsa-miR-4635	23		●
9q34.3	9	138,501,746	170,537	Gain	●	-	2	hsa-miR-4673	24		●
9q34.3	9	138,501,746	170,537	Gain	●	-	2	hsa-miR-4674	25		●
17q22	17	54,590,260	262,281	Gain		-	1	hsa-miR-4729	26		●
3q26.31	3	176,569,482	660,159	Loss	●	VUS	2	hsa-miR-4789-3p, -5p	27, 28		●
8q24.21	8	130,932,838	258,989	Gain		-	1	hsa-miR-5194	29		
7q11.21	7	63,771,570	141,117	Loss	●	-	2	hsa-miR-6839-3p, -5p	30, 31		
17q12,17q21.1	17	35,306,091	133,190	Gain	●	-	2	hsa-miR-6884-3p, -5p	32, 33		
1p22.3	1	86,476,458	204,829	Gain	●	-	1	hsa-miR-7856-5p	34		
19q13.42	19	59,843,208	24,896	Gain		-	1	hsa-miR-8061	35		

Cytoband, cytogenetic location of CNV; Chr, chromosome number; Start, hg18 (NCBI Build 36.1, March 2006); Size, in base pairs; Gain/loss, type of copy number aberration; Very rare, not found in 2,357 population controls and absent in OPGP comparison subjects (●), see text for details; # of miRNAs, number of miRNAs overlapped by the CNV; Clinical sig., (only applicable to CNVs >500 kb) assessment of clinical significance by two independent clinical cytogenetic laboratory directors as described elsewhere (2); miRNA name, name of miRNA; Count, cumulative count of miRNAs in cases and controls; Recurrent miRNAs, those overlapped by more than one CNV (●); Has predicted targets, at least one target is predicted for the miRNA at the 97th percentile score cut-off (●).

^aVariants >500 kb were assessed with respect to clinical significance as pathogenic, variants of unknown significance (VUS) or benign (see Methods for details).

^bThe stringency (97th percentile target prediction score and with genes predicted by two of three established tools) and lack of available data for many miRNAs (e.g., those numbered above 5,000), meant that many miRNAs are missing target genes.

^cAs detailed in miRBase, hsa-miR-3180, hsa-miR-3180-3p, and hsa-miR-3180-5p are distinct mature miRNAs.

^dAs detailed in miRBase, hsa-miR-4771 is a mature miRNA located at two different cytobands: 2p11.2 and 2q13.

Table S3. Predicted target genes of 25^a recurrent miRNAs overlapped by rare copy number variants (CNVs) in schizophrenia cases

Gene	Cytoband	Chr	Start	Size (bp)	OPGP Target Gene	Associated miRNA(s)
<i>ABCD4</i>	14q24.3	14	73,822,916	16,453		hsa-miR-3180-5p
<i>ACTR2</i>	2p14	2	65,308,547	40,826	●	hsa-miR-3180-5p
<i>ADAM33</i>	20p13	20	3,597,609	13,043		hsa-miR-484
<i>ANAPC7</i>	12q24.11	12	109,296,331	29,587		hsa-miR-484
<i>ANKLE1</i>	19p13.11	19	17,253,567	4,795		hsa-miR-4509
<i>ANKLE2</i>	12q24.33	12	131,813,900	34,558		hsa-miR-4715-3p
<i>API5</i>	11p11.2	11	43,290,253	30,384		hsa-miR-4715-3p
<i>ARID5B</i>	10q21.2	10	63,331,474	191,322		hsa-miR-4715-5p
<i>ARL13B</i>	3q11.1	3	95,181,957	72,841		hsa-miR-3180-5p
<i>ATF3</i>	1q32.3	1	210,854,986	4,535		hsa-miR-4435
<i>ATP1A2</i>	1q23.2	1	158,352,275	25,462		hsa-miR-4715-3p
<i>ATP2B1</i>	12q21.3	12	88,509,177	64,618		hsa-miR-4715-5p
<i>AVL9</i>	7p14.3	7	32,501,846	88,199		hsa-miR-484
<i>BBC3</i>	19q13.3-q13.4	19	52,416,797	10,903		hsa-miR-3180, 3180-3p
<i>BUB3</i>	10q26	10	124,904,423	10,140		hsa-miR-3670
<i>C10orf113</i>	10p12.31	10	21,454,757	20,687		hsa-miR-484
<i>C10orf2</i>	10q24	10	102,737,957	2,816		hsa-miR-484
<i>C13orf35</i>	13q34	13	112,381,694	4,002		hsa-miR-4509
<i>CACHD1</i>	1p31.3	1	64,709,168	220,665		hsa-miR-3179
<i>CAPRINI</i>	11p13	11	34,030,543	46,948		hsa-miR-4435
<i>CCDC25</i>	8p21.1	8	27,649,651	36,326		hsa-miR-4538
<i>CCDC53</i>	12q23.2	12	100,931,016	48,855		hsa-miR-484
<i>CCDC85C</i>	14q32.31	14	99,051,335	88,715		hsa-miR-3179
<i>CCNT2</i>	2q21.3	2	135,392,894	35,695	●	hsa-miR-4715-3p
<i>CD84</i>	1q24	1	158,784,669	31,183		hsa-miR-4435
<i>CERS6</i>	2q24.3	2	169,021,204	313,215		hsa-miR-3180-5p
<i>COL23A1</i>	5q35.3	5	177,598,304	351,501		hsa-miR-4435
<i>CORO2A</i>	9q22.3	9	99,926,876	32,888		hsa-miR-4435
<i>COX10</i>	17p12	17	13,913,647	137,609		hsa-miR-3180-5p
<i>CPEB2</i>	4p15.33	4	14,613,395	63,708	●	hsa-miR-4715-5p
<i>CREB3L3</i>	19p13.3	19	4,104,744	18,223		hsa-miR-484
<i>CSRNP2</i>	12q13.11-q13.12	12	49,743,795	12,817		hsa-miR-484
<i>CYB561D1</i>	1p13.3	1	109,838,284	2,121		hsa-miR-484
<i>CYP20A1</i>	2q33.2	2	203,812,030	57,847		hsa-miR-4435
<i>CYP4F22</i>	19p13.12	19	15,497,147	26,136		hsa-miR-3180, 3180-3p
<i>DIRAS2</i>	9q22.2	9	92,415,329	601		hsa-miR-3180-5p

Gene	Cytoband	Chr	Start	Size (bp)	OPGP Target Gene	Associated miRNA(s)
<i>DNAJC18</i>	5q31.2	5	138,777,735	25,299		hsa-miR-4435
<i>EFNA3</i>	1q21-q22	1	153,318,041	7,603		hsa-miR-3179
<i>EMX1</i>	2p13.2	2	72,998,489	16,103		hsa-miR-484
<i>EPAS1</i>	2p21-p16	2	46,378,554	86,750		hsa-miR-4538
<i>EPS8</i>	12p12.3	12	15,665,517	61,636		hsa-miR-4771
<i>ERMN</i>	2q24.1	2	157,886,028	6,210		hsa-miR-4752
<i>ESRRG</i>	1q41	1	214,746,903	170,541		hsa-miR-4539
<i>FAM102B</i>	1p13.3	1	108,904,573	74,723		hsa-miR-3180-5p
<i>FAM115A</i>	7q35	7	143,185,121	19,514		hsa-miR-3180-5p
<i>FAM124B</i>	2q36.2	2	224,952,533	22,197		hsa-miR-4435
<i>FAM60A</i>	12p11	12	31,326,912	15,494		hsa-miR-3179
<i>FAM92A1</i>	8q22.1	8	94,782,051	27,651		hsa-miR-4752
<i>FBXO28</i>	1q42.11	1	222,368,454	43,247		hsa-miR-3180-5p
<i>FGF1</i>	5q31	5	141,955,038	18,839	●	hsa-miR-484
<i>FMOD</i>	1q32	1	201,578,093	5,929		hsa-miR-4752
<i>FUT1</i>	19q13.3	19	53,945,252	1,099		hsa-miR-3180-5p
<i>FXR1</i>	3q28	3	182,113,167	63,454		hsa-miR-3180-5p
<i>GLCC11</i>	7p21.3	7	7,975,506	117,188		hsa-miR-3670
<i>GLT8D2</i>	12q	12	102,907,315	30,242		hsa-miR-4715-5p, 4752
<i>GOLGA6L1</i>	15q11.2	15	20,287,700	7,943		hsa-miR-4435
<i>GOLGA6L6</i>	15q11.2	15	18,999,510	7,528		hsa-miR-3180, 3180-3p, 4435
<i>GOSR2</i>	17q21	17	42,355,557	15,569		hsa-miR-484
<i>GSG1</i>	12p13.1	12	13,129,348	18,366		hsa-miR-3180-5p
<i>HECW2</i>	2q32.3	2	196,774,245	232,148		hsa-miR-3180-5p
<i>HK2</i>	2p13	2	74,915,215	56,362		hsa-miR-484
<i>HRASLS5</i>	11q13.2	11	62,987,578	27,505		hsa-miR-3180-5p
<i>HYPK</i>	15q15.3	15	41,879,911	2,151		hsa-miR-4715-3p
<i>IFNAR1</i>	21q22.11	21	33,619,230	30,496		hsa-miR-484
<i>IL21R</i>	16p11	16	27,348,893	19,213		hsa-miR-484
<i>IRF2</i>	4q34.1-q35.1	4	185,546,905	40,308		hsa-miR-3670
<i>ITK</i>	5q31-q32	5	156,540,566	71,701		hsa-miR-4538
<i>JPH1</i>	8q21	8	75,312,011	84,067		hsa-miR-617
<i>KAL1</i>	Xp22.32	X	8,461,035	199,043		hsa-miR-3180, 3180-3p
<i>KCNC4</i>	1p21	1	110,555,644	21,474	●	hsa-miR-3179
<i>KCNJ3</i>	2q24.1	2	155,263,533	155,958		hsa-miR-3180-5p
<i>KCTD16</i>	5q31.3	5	143,566,470	267,401		hsa-miR-4752
<i>KHDRBS1</i>	1p32	1	32,299,047	1		hsa-miR-4771
<i>KIAA1549</i>	7q34	7	138,173,190	143,366		hsa-miR-484

Gene	Cytoband	Chr	Start	Size (bp)	OPGP Target Gene	Associated miRNA(s)
<i>KLK9</i>	19q13.41	19	56,198,178	6,438		hsa-miR-3180, 3180-3p
<i>KRTAP5-9</i>	11q13.5	11	70,937,351	511		hsa-miR-3179
<i>LAMB3</i>	1q32	1	207,855,238	35,675		hsa-miR-484
<i>LIFR</i>	5p13-p12	5	38,517,453	49,054		hsa-miR-4752
<i>LRRC20</i>	10q22.1	10	71,731,115	75,181		hsa-miR-4771
<i>MAP2K7</i>	19p13.3-p13.2	19	7,874,829	8,488		hsa-miR-3179
<i>MAX</i>	14q23	14	64,542,674	96,137		hsa-miR-4715-5p
<i>MEN1</i>	11q13	11	64,328,381	5,777		hsa-miR-484
<i>MRPL4</i>	19p13.2	19	10,223,929	6,486		hsa-miR-3179
<i>MRPS14</i>	1q25.1	1	173,250,427	8,741		hsa-miR-4752
<i>MYCBP2</i>	13q22	13	76,517,513	281,399		hsa-miR-484
<i>MYO10</i>	5p15.1-p14.3	5	16,719,800	269,118		hsa-miR-4771
<i>NEDD4</i>	15q	15	53,909,386	163,660		hsa-miR-4752
<i>NFIA</i>	1p31.3-p31.2	1	61,315,885	377,696		hsa-miR-4509
<i>NFIX</i>	19p13.3	19	12,967,651	94,534		hsa-miR-3180
<i>NKRF</i>	Xq24	X	118,607,342	14,140		hsa-miR-4715-5p
<i>NOL9</i>	1p36.31	1	6,508,500	28,650		hsa-miR-484
<i>NQO1</i>	16q22.1	16	68,302,379	15,465		hsa-miR-4752
<i>NTRK2</i>	9q22.1	9	86,475,483	350,690		hsa-miR-4435
<i>ORAI2</i>	7q22.1	7	101,866,408	8,097		hsa-miR-484
<i>PAK2</i>	3q29	3	197,993,914	45,760		hsa-miR-3179
<i>PAX2</i>	10q24	10	102,496,007	81,360		hsa-miR-3180
<i>PIK3R3</i>	1p34.1	1	46,281,931	88,281		hsa-miR-4715-5p
<i>PLCB4</i>	20p12	20	9,236,461	171,176	●	hsa-miR-4752
<i>POLD4</i>	11q13	11	66,876,013	1,434		hsa-miR-484
<i>PRPF40A</i>	2q23.3	2	153,221,065	61,135		hsa-miR-4715-3p
<i>PTGER4</i>	5p13.1	5	40,716,852	11,386		hsa-miR-484
<i>RAB28</i>	4p15.33	4	12,979,279	115,594		hsa-miR-4539
<i>RARG</i>	12q13	12	51,891,726	15,871		hsa-miR-3179
<i>RASGRP1</i>	15q14	15	36,570,046	74,076		hsa-miR-3180-5p
<i>RBM15</i>	1p13	1	110,683,550	6,950		hsa-miR-3180-5p
<i>RBM39</i>	20q11.22	20	33,755,816	36,395		hsa-miR-3670
<i>RDH10</i>	8q21.11	8	74,370,078	27,748		hsa-miR-4715-5p
<i>REEP1</i>	2p11.2	2	86,297,733	120,978		hsa-miR-4752
<i>RHOA</i>	3p21.3	3	49,372,645	15,382		hsa-miR-4715-5p
<i>RRAGC</i>	1p34	1	39,077,811	20,095		hsa-miR-3179
<i>RTN3</i>	11q13	11	63,205,684	76,566		hsa-miR-4538
<i>SI00PBP</i>	1p35.1	1	33,064,287	29,940	●	hsa-miR-484

Gene	Cytoband	Chr	Start	Size (bp)	OPGP Target Gene	Associated miRNA(s)
<i>SAMD5</i>	6q24.3	6	147,871,757	55,529		hsa-miR-3180-5p
<i>SECISBP2</i>	9q22.2	9	91,123,311	40,249		hsa-miR-3180-5p
<i>SIKE1</i>	1p13.2	1	115,118,414	6,338		hsa-miR-4715-3p
<i>SLC20A2</i>	8p11.21	8	42,394,477	54,589	●	hsa-miR-484
<i>SLC39A7</i>	6p21.3	6	33,277,000	2,569		hsa-miR-3180-3p
<i>SMAD4</i>	18q21.1	18	46,827,414	31,422	●	hsa-miR-4715-5p
<i>SNN</i>	16p13	16	11,677,416	268		hsa-miR-484
<i>SNRNP200</i>	2q11.2	2	96,304,476	30,427		hsa-miR-484
<i>SOST</i>	17q11.2	17	39,188,235	3,401		hsa-miR-3180, 3180-3p
<i>SPRY3</i>	Xq28	X	154,656,727	868		hsa-miR-3179
<i>STK17A</i>	7p13	7	43,589,367	41,600		hsa-miR-4435
<i>SYNGAP1</i>	6p21.3	6	33,496,019	31,643		hsa-miR-3179, 3180, 3180-3p
<i>TLX3</i>	5q35.1	5	170,668,974	2,235		hsa-miR-3180, 3180-3p
<i>TMX3</i>	18q22	18	64,495,149	38,050		hsa-miR-4771
<i>TNNI1</i>	1q31.3	1	199,646,078	7,467		hsa-miR-4715-3p
<i>TOPBP1</i>	3q22.1	3	134,802,783	59,879		hsa-miR-484
<i>TRAT1</i>	3q13	3	110,024,464	30,951		hsa-miR-484
<i>TRIM48</i>	11q11	11	54,786,319	7,072		hsa-miR-3180, 3180-3p
<i>TRPV2</i>	17p11.2	17	16,261,707	19,222		hsa-miR-4715-3p
<i>TSGA10</i>	2q11.2	2	98,981,091	111,244		hsa-miR-484
<i>UBE2D2</i>	5q31.2	5	138,921,560	65,011		hsa-miR-3179
<i>UXT</i>	Xp11.23-p11.22	X	47,396,184	7,087		hsa-miR-484
<i>VASH2</i>	1q32.3	1	211,191,702	36,848		hsa-miR-4435
<i>VPS13C</i>	15q22.2	15	59,933,947	205,919		hsa-miR-4509
<i>WASL</i>	7q31.3	7	123,111,808	64,217		hsa-miR-4715-3p
<i>WDR47</i>	1p13.3	1	109,315,574	52,084		hsa-miR-4771
<i>WFS1</i>	4p16.1	4	6,330,083	25,014		hsa-miR-484
<i>XKR4</i>	8q12.1	8	56,177,602	421,739		hsa-miR-4435
<i>XKR6</i>	8p23.1	8	10,792,871	303,388		hsa-miR-3179
<i>XPO4</i>	13q11	13	20,255,860	119,018		hsa-miR-484
<i>ZNF544</i>	19q13.43	19	63,447,201	18,732		hsa-miR-4715-5p
<i>ZNF732</i>	4p16.3	4	254,887	25,058		hsa-miR-4752
<i>ZZZ3</i>	1p31.1	1	77,803,912	67,716		hsa-miR-4771

Gene, putative target gene name; Cytoband, cytogenetic location of gene; Chr, chromosome number; Start, hg18 (NCBI Build 36.1, March 2006); Size, in base pairs; OPGP target gene, also predicted to be targeted by a different miRNA overlapped by a rare CNV in an OPGP comparison subject; Associated miRNA(s), miRNA(s) overlapped by a schizophrenia case CNV that are predicted to target the gene.

^a10 of the 25 recurrent miRNAs overlapped by rare CNVs in schizophrenia cases did not have any predicted targets at the 97th percentile score cut-off.

Table S4. Top 20 functional gene-sets over-represented in recurrent miRNA target genes in schizophrenia

Gene-set Characteristics		Over-representation Analysis					
ID	Name	<i>p</i>	OR	(95% CI)		SZ Target Genes in Gene-set	OPGP Target Genes in Gene-set
GO:0031344	GO: Regulation of cell projection organization	0.0015	7.88	(1.85)	(46.91)	<i>CAPRINI; ERMN; MYO10; NEDD4; NTRK2; RHOA; TRPV2; WASL</i>	<i>CDC42; TTL; WNT3A</i>
GO:0048812	GO: Neuron projection morphogenesis	0.0037	3.61	(1.38)	(9.64)	<i>CAPRINI; KALI; LIFR; MYCBP2; MYO10; NEDD4; NTRK2; PAK2; PAX2; RHOA; TRPV2; WASL</i>	<i>CDC42; FGFR1; HRAS; ITGA9; SEMA6D; SLC11A2; SLIT3; TTL; WEE1; WNT3A</i>
GO:0048667	GO: Cell morphogenesis involved in neuron differentiation	0.0051	3.65	(1.33)	(10.29)	<i>CAPRINI; KALI; MYCBP2; MYO10; NEDD4; NTRK2; PAK2; PAX2; RHOA; TRPV2; WASL</i>	<i>CDC42; FGFR1; HRAS; ITGA9; SEMA6D; SLC11A2; SLIT3; TTL; WNT3A</i>
GO:0051402	GO: Neuron apoptotic process	0.0053	8.72	(1.53)	(89.71)	<i>MAP2K7; MAX; NQO1; NTRK2; RHOA; WFS1</i>	<i>HRAS; SIX4</i>
GO:0070997	GO: Neuron death	0.0053	8.72	(1.53)	(89.71)	<i>MAP2K7; MAX; NQO1; NTRK2; RHOA; WFS1</i>	<i>HRAS; SIX4</i>
GO:0031175	GO: Neuron projection development	0.0061	3.27	(1.28)	(8.47)	<i>CAPRINI; KALI; LIFR; MYCBP2; MYO10; NEDD4; NTRK2; PAK2; PAX2; RHOA; TRPV2; WASL</i>	<i>CDC42; FGFR1; HRAS; ITGA9; SEMA6D; SLC11A2; SLIT3; TTL; UBE4B; WEE1; WNT3A</i>
GO:0032990	GO: Cell part morphogenesis	0.0061	3.27	(1.28)	(8.47)	<i>CAPRINI; KALI; LIFR; MYCBP2; MYO10; NEDD4; NTRK2; PAK2; PAX2; RHOA; TRPV2; WASL</i>	<i>CDC42; FGFR1; HRAS; ITGA9; ONECUT2; SEMA6D; SLC11A2; SLIT3; TTL; WEE1; WNT3A</i>
GO:0048858	GO: Cell projection morphogenesis	0.0061	3.27	(1.28)	(8.47)	<i>CAPRINI; KALI; LIFR; MYCBP2; MYO10; NEDD4; NTRK2; PAK2; PAX2; RHOA; TRPV2; WASL</i>	<i>CDC42; FGFR1; HRAS; ITGA9; ONECUT2; SEMA6D; SLC11A2; SLIT3; TTL; WEE1; WNT3A</i>
GO:0022604	GO: Regulation of cell morphogenesis	0.0096	3.79	(1.22)	(12.31)	<i>CAPRINI; ERMN; MYO10; NEDD4; NTRK2; PAX2; PRPF40A; RHOA; TRPV2</i>	<i>CDC42SE2; FOXA1; FOXA2; SMAD7; TTL; VEGFA; WNT3A</i>
GO:0030030	GO: Cell projection organization	0.0107	2.64	(1.15)	(6.00)	<i>CAPRINI; ERMN; KALI; LIFR; MYCBP2; MYO10; NEDD4; NTRK2; PAK2; PAX2; RHOA; TRPV2; TSGA10; WASL</i>	<i>CDC42; FGFR1; HRAS; IFT20; ITGA9; LPIN1; ONECUT2; PLEKHA1; SEMA6D; SLC11A2; SLIT3; TTL; UBE2B; UBE4B; WEE1; WNT3A</i>
GO:0097285	GO: Cell-type specific apoptotic process	0.0131	3.91	(1.16)	(14.01)	<i>BBC3; MAP2K7; MAX; NQO1; NTRK2; PAX2; RHOA; WFS1</i>	<i>DMPK; HRAS; KITLG; LRP6; MYOCD; SIX4</i>
GO:0010975	GO: Regulation of neuron projection	0.0157	7.20	(1.16)	(76.57)	<i>CAPRINI; NEDD4; NTRK2; RHOA; TRPV2</i>	<i>TTL; WNT3A</i>

Gene-set Characteristics		Over-representation Analysis					
ID	Name	<i>p</i>	OR	(95% CI)		SZ Target Genes in Gene-set	OPGP Target Genes in Gene-set
	development						
GO:0031346	GO: Positive regulation of cell projection organization	0.0157	7.20	(1.16)	(76.57)	<i>CAPRINI1; NTRK2; RHOA; TRPV2; WASL</i>	<i>CDC42; WNT3A</i>
GO:0043523	GO: Regulation of neuron apoptotic process	0.0157	7.20	(1.16)	(76.57)	<i>MAP2K7; NQO1; NTRK2; RHOA; WFS1</i>	<i>HRAS; SIX4</i>
GO:1901214	GO: Regulation of neuron death	0.0157	7.20	(1.16)	(76.57)	<i>MAP2K7; NQO1; NTRK2; RHOA; WFS1</i>	<i>HRAS; SIX4</i>
KEGG:HSA04630	KEGG: JAK-STAT signaling pathway	0.0157	7.20	(1.16)	(76.57)	<i>IFNARI; IL21R; LIFR; PIK3R3; SPRY3</i>	<i>GHR; PIK3R1</i>
GO:0007409	GO: Axonogenesis	0.0159	3.31	(1.10)	(10.14)	<i>KALI; MYCBP2; MYO10; NTRK2; PAK2; PAX2; RHOA; TRPV2; WASL</i>	<i>CDC42; FGFR1; HRAS; ITGA9; SEMA6D; SLIT3; TTL; WNT3A</i>
GO:0006984	GO: ER-nucleus signaling pathway	0.0181	Inf	(1.16)	(Inf)	<i>ATF3; GOSR2; WFS1</i>	
GO:0006987	GO: Activation of signaling protein activity involved in unfolded protein response	0.0181	Inf	(1.16)	(Inf)	<i>ATF3; GOSR2; WFS1</i>	
GO:0030968	GO: Endoplasmic reticulum unfolded protein response	0.0181	Inf	(1.16)	(Inf)	<i>ATF3; GOSR2; WFS1</i>	

ID, gene-set ID; Name, gene-set name; *p*, uncorrected one-sided Fisher's exact test *p*-value; OR, odds ratio; 95% CI, two-sided 95% confidence interval of odds ratio; SZ target genes in gene-set, list of target genes of schizophrenia case miRNAs overlapped by CNVs that are in the gene-set; OPGP target genes in gene-set, list of target genes of OPGP comparison subject miRNAs overlapped by CNVs that are in the gene-set.

Table S5. All stringent rare autosomal copy number variants (CNVs) in schizophrenia cases and OPGP comparison subjects

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	387	1p36.33	1	696962	840550	143589	Gain	-		-
Case	275	1p36.33	1	702408	799636	97229	Gain	-		-
Case	293	1p36.32	1	4159621	4173702	14082	Loss	Yes		-
Case	273	1p36.32	1	5011917	5079679	67763	Loss	-		-
Case	221	1p36.31	1	6362540	6452776	90237	Loss	Yes	<i>ACOT7; HES2; ESPN; TNFRSF25;</i> <i>PLEKHG5</i>	hsa-miR-4252
Case	67	1p36.31	1	7063417	7097083	33667	Loss	Yes	<i>CAMTA1</i>	-
Case	68	1p36.23	1	7545052	7589574	44523	Loss	Yes	-	-
Case	245	1p36.21	1	12675790	12702845	27056	Loss	Yes	<i>AADA3L3</i>	-
Case	358	1p36.13	1	16445391	16465956	20566	Gain	-	<i>FBXO42</i>	-
Case	192	1p36.13	1	18449697	18478191	28495	Loss	Yes	-	-
Case	234	1p36.12	1	21564484	21588922	24439	Loss	-	-	-
Case	154	1p36.12	1	22193098	22209830	16733	Gain	Yes	<i>CELA3A</i>	-
Case	272	1p35.3	1	28141293	28264069	122777	Gain	-	<i>SMPDL3B; XKR8; EYA3</i>	-
Case	358	1p33	1	48438616	48566467	127852	Gain	-	<i>SLC5A9; SPATA6</i>	-
Case	372	1p33	1	48438616	48569919	131304	Gain	-	<i>SLC5A9; SPATA6</i>	-
Case	178	1p33	1	49337980	49517287	179308	Loss	Yes	<i>AGBL4</i>	-
Case	100	1p32.3	1	54875049	55055911	180863	Gain	-	<i>MROH7; TTC4; PARS2; TTC22; C1orf177</i>	-
Case	330	1p32.3	1	56046861	56065730	18870	Loss	Yes	-	-
Case	20	1p32.2	1	56496439	56532019	35581	Gain	Yes	-	-
Case	42	1p31.3	1	65626237	65728313	102077	Gain	Yes	<i>DNAJC6; LEPROT</i>	-
Case	141	1p31.1	1	71150238	71194423	44186	Loss	Yes	<i>PTGER3</i>	-
Case	134	1p31.1	1	71401364	71441494	40131	Loss	Yes	-	-
Case	104	1p31.1	1	78703526	78847601	144076	Gain	Yes	<i>PTGFR</i>	-
Case	239	1p31.1	1	79076338	79109821	33484	Loss	Yes	-	-
Case	272	1p22.2	1	91146987	91367401	220415	Loss	Yes	<i>ZNF644</i>	-
Case	57	1p21.3	1	95224514	95238190	13677	Loss	Yes	-	-
Case	241	1p21.1	1	104023054	104041509	18456	Gain	Yes	<i>AMY1A; AMY1B; AMY1C</i>	-
Case	90	1p21.1	1	106356790	106385289	28500	Loss	Yes	-	-
Case	122	1p13.3	1	107061308	107295787	234480	Gain	Yes	-	-
Case	97	1p13.2	1	113065764	113266981	201218	Gain	-	<i>FAM19A3; SLC16A1</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	19	1p13.2	1	113111941	113527270	415330	Gain	Yes	<i>SLC16A1; LRIG2</i>	-
Case	186	1q21.1	1	142693888	142788045	94158	Loss	Yes	-	-
Case	1	1q21.1	1	143677127	144503421	826295	Gain		<i>PDE4DIP; SEC22B; NOTCH2NL; NBPFI2; LOC100288142; HFE2; TXNIP; POLR3GL; ANKRD34A; LIXIL; RBM8A; PEX11B; ITGA10; ANKRD35; PIAS3; NUDT17; POLR3C; RNF115; CD160; PDZK1; GPR89A</i>	hsa-miR-6736- 5p; hsa-miR- 6736-3p
Case	2	1q21.1	1	144472163	146311414	1839252	Gain	Yes	<i>PDZK1; GPR89A; GPR89C; NBPFI1; NBPFI24; PRKAB2; FMO5; CHD1L; BCL9; ACP6; GJA5; GJA8; GPR89B; NBPFI0; NBPFI8</i>	hsa-miR-5087
Case	3	1q21.1	1	144643825	146297807	1653983	Gain	Yes	<i>NBPFI1; NBPFI24; PRKAB2; FMO5; CHD1L; BCL9; ACP6; GJA5; GJA8; GPR89B; GPR89C; NBPFI0; NBPFI8</i>	hsa-miR-5087
Case	155	1q22	1	153455784	153482621	26838	Loss		<i>GBA</i>	-
Case	193	1q22	1	153569442	153829982	260541	Gain	Yes	<i>ASHIL</i>	hsa-miR-555
Case	262	1q22	1	153903079	153971056	67978	Gain	Yes	<i>YYIAP1; DAP3</i>	-
Case	137	1q23.1	1	156783620	156809565	25946	Gain		<i>OR6Y1; OR6P1</i>	-
Case	389	1q23.1	1	156783620	156809565	25946	Gain		<i>OR6Y1; OR6P1</i>	-
Case	358	1q23.3	1	159763524	159778033	14510	Gain		-	-
Case	87	1q24.3	1	170223915	170271728	47814	Loss	Yes	<i>DNM3</i>	-
Case	309	1q25.2	1	174503844	174523252	19409	Loss	Yes	-	-
Case	345	1q31.1	1	186278904	186297294	18391	Gain	Yes	-	-
Case	48	1q31.1	1	187802307	187958633	156327	Gain	Yes	-	-
Case	116	1q31.1	1	187935945	188076795	140851	Gain	Yes	-	-
Case	254	1q31.1	1	188294792	188351607	56816	Gain	Yes	<i>FAM5C</i>	-
Case	288	1q31.3	1	192930118	192951366	21249	Loss	Yes	-	-
Case	355	1q31.3	1	197339345	197361255	21911	Loss	Yes	-	-
Case	104	1q41	1	213914685	213979490	64806	Loss	Yes	<i>USH2A</i>	-
Case	147	1q41	1	215772218	215898881	126664	Loss	Yes	<i>GPATCH2; SPATA17</i>	-
Case	176	1q41	1	217908844	217924869	16026	Loss		-	-
Case	336	1q41	1	220034440	220063361	28922	Gain	Yes	-	-
Case	328	1q42.12	1	224208405	224221291	12887	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	69	1q42.13	1	226634235	226688970	54736	Gain	Yes	<i>TRIM11; TRIM17; HIST3H3</i>	hsa-miR-6742-5p; hsa-miR-6742-3p
Case	70	1q42.13	1	226673588	226783563	109976	Gain	Yes	<i>HIST3H3; HIST3H2A; HIST3H2BB; RNF187</i>	hsa-miR-4666a-5p; hsa-miR-4666a-3p
Case	38	1q42.2	1	230150208	230271469	121262	Loss	Yes	<i>DISC1</i>	-
Case	76	1q43	1	234676838	234695332	18495	Gain	Yes	-	-
Case	15	1q43	1	235333993	235345777	11785	Loss		-	-
Case	4	1q43	1	235349594	236075821	726228	Gain	Yes	<i>RYR2</i>	hsa-miR-4428
Case	159	1q43	1	238952828	238970020	17193	Loss	Yes	-	-
Case	237	1q43	1	240552337	240997245	444909	Gain	Yes	<i>PLD5</i>	-
Case	217	1q43	1	240774398	241191134	416737	Gain	Yes	-	-
Case	91	1q43	1	241230465	241359750	129286	Loss	Yes	<i>CEP170</i>	-
Case	217	1q43	1	241324686	241409849	85164	Gain	Yes	<i>CEP170</i>	-
Case	220	1q44	1	244259739	244438494	178756	Loss	Yes	-	-
Case	73	1q44	1	244265482	244438494	173013	Loss	Yes	-	-
Case	228	1q44	1	244436222	244460455	24234	Loss	Yes	-	-
Case	171	1q44	1	244599732	244635324	35593	Loss	Yes	-	-
Case	69	2p25.3	2	267995	324842	56848	Gain	Yes	<i>FAM150B</i>	-
Case	5	2p25.3	2	1377419	2122564	745146	Gain	Yes	<i>TPO; PXDN; MYTIL</i>	-
Case	10	2p25.2	2	5437827	5448907	11081	Loss	Yes	-	-
Case	218	2p25.2	2	5487063	5497177	10115	Loss	Yes	-	-
Case	357	2p25.1	2	12602820	12613687	10868	Loss		-	-
Case	348	2p25.1	2	12602820	12613687	10868	Loss		-	-
Case	347	2p24.3	2	13643345	13690975	47631	Loss	Yes	-	-
Case	329	2p24.2	2	18439428	18464485	25058	Gain	Yes	-	-
Case	335	2p24.2	2	18439428	18463108	23681	Gain	Yes	-	-
Case	69	2p24.1,2p24.2	2	19043235	19113175	69941	Gain	Yes	-	-
Case	228	2p24.1	2	20237466	20265385	27920	Gain	Yes	-	-
Case	181	2p24.1	2	21923738	21965449	41712	Loss		-	-
Case	67	2p23.3	2	25726572	25777692	51121	Gain	Yes	<i>DTNB</i>	-
Case	24	2p23.3	2	27614504	27637932	23429	Loss		-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	164	2p23.2	2	28901510	28934783	33274	Loss	Yes	<i>SPDYA; TRMT61B</i>	-
Case	120	2p23.1	2	30668502	30704950	36449	Loss	-		-
Case	368	2p23.1	2	30668502	30702847	34346	Loss	-		-
Case	371	2p23.1	2	30668502	30702847	34346	Loss	-		-
Case	166	2p23.1	2	30668502	30702847	34346	Loss	-		-
Case	383	2p23.1	2	30668502	30702847	34346	Loss	-		-
Case	104	2p22.3	2	34048167	34115352	67186	Gain	-		-
Case	374	2p22.3	2	34048167	34115352	67186	Gain	-		-
Case	140	2p22.3	2	35246938	35331818	84881	Loss	Yes		-
Case	268	2p22.3	2	35435011	35469179	34169	Loss	-		-
Case	134	2p22.1	2	40056009	40089349	33341	Loss	Yes		-
Case	160	2p22.1	2	40269877	40286924	17048	Loss	-		-
Case	25	2p22.1	2	40998583	41084366	85784	Loss	Yes		-
Case	301	2p21	2	42485886	42499654	13769	Loss	-		-
Case	101	2p21	2	42869223	42995273	126051	Loss	Yes	<i>HAAO</i>	-
Case	2	2p21	2	42985931	43014684	28754	Loss	-		-
Case	103	2p16.3	2	48638975	48703509	64535	Loss	Yes	<i>STONI; STONI-GTF2A1L; GTF2A1L</i>	-
Case	32	2p16.3	2	48891502	48927078	35577	Loss	-		-
Case	170	2p16.3	2	50337141	50355655	18515	Loss	Yes		-
Case	292	2p16.3	2	51378529	51439625	61097	Loss	Yes		-
Case	356	2p16.3	2	51387810	51439625	51816	Loss	Yes		-
Case	265	2p16.3	2	52253660	52437594	183935	Loss	-		-
Case	365	2p16.2	2	52831698	52852841	21144	Loss	-		-
Case	345	2p16.2	2	52831949	52852841	20893	Loss	-		-
Case	202	2p15	2	61274805	61515063	240259	Gain	Yes	<i>USP34</i>	-
Case	66	2p15	2	62049330	62085804	36475	Loss	Yes	<i>COMMD1</i>	-
Case	32	2p15	2	62106806	62131189	24384	Loss	Yes		-
Case	349	2p15	2	62335968	62364454	28487	Gain	Yes		-
Case	204	2p13.2	2	72657772	72949014	291243	Gain	Yes	<i>EXOC6B</i>	-
Case	180	2p13.2	2	73708431	73782394	73964	Gain	-	<i>NAT8; NAT8B</i>	-
Case	380	2p13.2	2	73721453	73782394	60942	Gain	-	<i>NAT8; NAT8B</i>	-
Case	135	2p13.1	2	75300931	75358721	57791	Loss	-		-
Case	118	2p12	2	77962425	78201385	238961	Gain	Yes		-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	121	2p11.2	2	86959387	87333362	373976	Loss	Yes	<i>RGPD2; RGPD1; PLGLB1; PLGLB2</i>	hsa-miR-4771
Case	171	2p11.2	2	87581007	87609093	28087	Gain	Yes	-	-
Case	191	2p11.2	2	88078186	88111932	33747	Gain	Yes	<i>KRCC1</i>	-
Case	271	2p11.2	2	88942380	89025931	83552	Loss	-	-	-
Case	378	2p11.2	2	89198725	89402227	203503	Loss	-	-	-
Case	386	2p11.2	2	89254947	89332309	77363	Loss	-	-	-
Case	171	2p11.2	2	89572001	89636366	64366	Gain	Yes	-	-
Case	116	2p11.1	2	91285532	91651995	366464	Gain	-	-	-
Case	6	2q11.1	2	94691614	95427385	735772	Gain	Yes	<i>TEKT4; MAL; MRPS5; ZNF514; ZNF2; PROM2; KCNIP3</i>	-
Case	259	2q11.2	2	100472080	100792196	320117	Gain	Yes	<i>PDCL3</i>	-
Case	155	2q11.2	2	100885342	101021766	136425	Gain	Yes	<i>NPAS2; RPL31; TBC1D8</i>	-
Case	274	2q12.1	2	103357649	103431732	74084	Loss	Yes	-	-
Case	71	2q13	2	108619802	108680810	61009	Loss	Yes	<i>LIMS1</i>	-
Case	72	2q13	2	108619802	108681384	61583	Loss	Yes	<i>LIMS1</i>	-
Case	7	2q13	2	111105101	112832463	1727363	Gain	Yes	<i>BUB1; ACOXL; BCL2L11; ANAPC1; MERTK; TMEM87B; FBLN7; ZC3H8; ZC3H6</i>	hsa-miR-4435; hsa-miR-4771
Case	8	2q13	2	111105101	112832463	1727363	Loss	Yes	<i>BUB1; ACOXL; BCL2L11; ANAPC1; MERTK; TMEM87B; FBLN7; ZC3H8; ZC3H6</i>	hsa-miR-4435; hsa-miR-4771
Case	9	2q13	2	111105101	112832463	1727363	Gain	Yes	<i>BUB1; ACOXL; BCL2L11; ANAPC1; MERTK; TMEM87B; FBLN7; ZC3H8; ZC3H6</i>	hsa-miR-4435; hsa-miR-4771
Case	333	2q14.2	2	119348895	119363368	14474	Gain	Yes	-	-
Case	13	2q14.3	2	123879663	123925928	46266	Gain	Yes	-	-
Case	159	2q21.1	2	130580429	130874329	293901	Loss	Yes	<i>POTEF; CCDC74B; SMPD4; MZT2B; TUBA3E; CCDC115; IMP4; PTPN18</i>	-
Case	233	2q21.1	2	131597549	131616341	18793	Gain	Yes	<i>PLEKHB2</i>	-
Case	142	2q21.2	2	132920022	132944012	23991	Loss	Yes	-	-
Case	182	2q21.2	2	133808588	133833323	24736	Loss	-	-	-
Case	173	2q21.3	2	135535377	135563712	28336	Gain	Yes	-	-
Case	10	2q22.1	2	139898997	141221189	1322193	Loss	Yes	<i>LRP1B</i>	hsa-miR-7157- 5p; hsa-miR- 7157-3p

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	173	2q23.1	2	148420435	148450570	30136	Loss	Yes	<i>ORC4</i>	-
Case	199	2q23.3	2	151539888	151760207	220320	Loss	Yes	-	-
Case	114	2q24.2	2	159806778	159821751	14974	Loss	Yes	<i>WDSUB1</i>	-
Case	90	2q24.3	2	163819989	163857985	37997	Loss	Yes	-	-
Case	239	2q24.3	2	167192976	167341084	148109	Loss	Yes	-	-
Case	11	2q32.1	2	185043646	185834514	790869	Loss	Yes	<i>ZNF804A</i>	-
Case	375	2q32.1	2	186556027	186656139	100113	Loss	-	-	-
Case	350	2q32.1	2	186597213	186704010	106798	Loss	-	-	-
Case	99	2q32.1	2	187760608	187850330	89723	Loss	Yes	-	-
Case	140	2q32.3	2	192327732	192358419	30688	Loss	Yes	-	-
Case	167	2q32.3	2	193533075	193590738	57664	Loss	Yes	-	-
Case	30	2q32.3	2	194002556	194135536	132981	Loss	Yes	-	-
Case	274	2q32.3	2	195017216	195073830	56615	Loss	Yes	-	-
Case	351	2q33.1	2	200851654	200872028	20375	Gain	Yes	-	-
Case	231	2q34	2	209363230	209475589	112360	Loss	Yes	-	-
Case	106	2q34	2	215018681	215039590	20910	Loss	Yes	-	-
Case	264	2q35	2	215423952	215561952	138001	Loss	Yes	<i>ABCA12</i>	-
Case	98	2q36.3	2	227070513	227152270	81758	Gain	Yes	-	-
Case	180	2q36.3	2	228288707	228312405	23699	Gain	Yes	-	-
Case	32	2q37.1	2	231122629	231137464	14836	Gain	Yes	-	-
Case	214	2q37.1	2	231122629	231137464	14836	Gain	Yes	-	-
Case	117	2q37.1	2	232919954	232951904	31951	Gain	Yes	<i>ALPP</i>	-
Case	117	2q37.1	2	232979125	233026322	47198	Gain	-	<i>ALPPL2</i>	-
Case	213	2q37.2	2	235871664	236172371	300708	Gain	Yes	<i>AGAP1</i>	-
Case	213	2q37.3,2q37.2	2	236798401	237065060	266660	Gain	Yes	<i>ASB18; IQCA1</i>	-
Case	313	2q37.3	2	237296232	237338319	42088	Loss	Yes	-	-
Case	5	2q37.3	2	240713305	240809448	96144	Gain	Yes	<i>MYEOV2; OTOS</i>	-
Case	229	3p26.3	3	1950866	2013356	62491	Loss	Yes	-	-
Case	351	3p26.2	3	4234661	4260881	26221	Loss	-	-	-
Case	25	3p26.2	3	5365237	5419070	53834	Loss	Yes	-	-
Case	167	3p26.1	3	6057834	6075959	18126	Gain	Yes	-	-
Case	146	3p26.1	3	7058814	7094708	35895	Loss	Yes	-	-
Case	150	3p25.2	3	11685471	11712485	27015	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	188	3p25.1	3	12763838	12834867	71030	Loss		<i>TMEM40; CAND2</i>	-
Case	345	3p25.1	3	13173248	13228860	55613	Gain	Yes	-	-
Case	301	3p25.1	3	13225682	13242771	17090	Loss	Yes	-	-
Case	97	3p25.1	3	13362176	13684365	322190	Gain	Yes	<i>NUP210; HDAC11; FBLN2</i>	-
Case	64	3p24.3	3	14986119	15005549	19431	Loss	Yes	-	-
Case	163	3p24.3	3	17340570	17710957	370388	Loss		<i>TBC1D5</i>	-
Case	274	3p24.3	3	18791540	18836148	44609	Loss	Yes	-	-
Case	85	3p24.3	3	22481868	22576901	95034	Loss	Yes	-	-
Case	136	3p24.2	3	25483068	25516762	33695	Gain	Yes	-	-
Case	184	3p24.1	3	29266793	29284867	18075	Gain	Yes	-	-
Case	100	3p22.3	3	32189820	32258301	68482	Gain	Yes	<i>CMTM8</i>	-
Case	251	3p22.3	3	33226607	33261078	34472	Loss	Yes	<i>SUSD5</i>	-
Case	105	3p22.2	3	36923941	36990564	66624	Loss	Yes	<i>TRANK1</i>	-
Case	116	3p22.2	3	37389502	37409687	20186	Gain	Yes	-	-
Case	94	3p22.1	3	40016813	40046964	30152	Gain	Yes	-	-
Case	38	3p21.33	3	43963029	43990672	27644	Gain	Yes	-	-
Case	125	3p21.31	3	48145112	48178638	33527	Gain	Yes	<i>CDC25A</i>	-
Case	226	3p21.31	3	49211200	49295063	83864	Loss	Yes	<i>CCDC36; C3orf62; USP4</i>	hsa-miR-4271
Case	9	3p21.31	3	49382869	49443186	60318	Gain	Yes	<i>RHOA; TCTA; AMT; NICN1</i>	-
Case	229	3p21.31	3	49783282	49802496	19215	Loss	Yes	-	-
Case	263	3p14.2	3	59680175	60996566	1316392	Gain	Yes	<i>FHIT</i>	-
Case	271	3p14.2	3	60345677	60374212	28536	Loss	Yes	-	-
Case	270	3p14.1	3	68221067	68232652	11586	Loss		-	-
Case	341	3p12.1	3	83899825	84131997	232173	Gain	Yes	-	-
Case	12	3p12.1	3	83940054	84978204	1038151	Loss		-	-
Case	286	3p11.2	3	87330448	87358206	27759	Gain	Yes	-	hsa-miR-4795-5p; hsa-miR-4795-3p
Case	302	3q11.2	3	96236105	96358588	122484	Loss	Yes	-	-
Case	117	3q11.2	3	96525701	96563053	37353	Loss	Yes	-	-
Case	261	3q12.1	3	99822187	99852386	30200	Gain	Yes	-	-
Case	238	3q13.13	3	109883836	109909442	25607	Gain	Yes	<i>DZIP3</i>	-
Case	153	3q13.2	3	114363004	114376124	13121	Gain		-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	13	3q13.31	3	115308450	117370859	2062410	Loss	Yes	<i>DRD3; ZNF80; TIGIT; ZBTB20; GAP43; LSAMP</i>	hsa-miR-568; hsa-miR-4796- 5p; hsa-miR- 4796-3p
Case	33	3q13.31	3	116782755	116794573	11819	Loss	Yes	-	-
Case	59	3q21.1	3	123892898	124169203	276306	Gain	Yes	<i>PARP14; HSPBAP1; DIRC2; SEMA5B</i>	-
Case	59	3q21.1	3	124187728	124233107	45380	Gain	Yes	-	-
Case	103	3q22.3	3	138510648	138525910	15263	Loss		-	-
Case	223	3q22.3	3	139333888	139417312	83425	Gain	Yes	<i>DBR1; ARMC8</i>	-
Case	335	3q23	3	142048537	142104536	56000	Loss	Yes	-	-
Case	159	3q24	3	145634698	145665753	31056	Loss	Yes	-	-
Case	179	3q25.33	3	160041996	160365625	323630	Gain	Yes	<i>IQCJ; IQCJ-SCHIP1</i>	-
Case	205	3q26.1	3	162177802	162200860	23059	Loss	Yes	-	-
Case	152	3q26.1	3	163250120	163266002	15883	Loss	Yes	-	-
Case	388	3q26.1	3	164178597	164574615	396019	Loss		-	-
Case	359	3q26.1	3	165144991	165194523	49533	Loss		-	-
Case	371	3q26.1	3	165144991	165194523	49533	Loss		-	-
Case	336	3q26.1	3	165247925	165313958	66034	Gain	Yes	-	-
Case	221	3q26.1	3	165337963	165401075	63113	Gain	Yes	-	hsa-miR-1263
Case	311	3q26.1	3	165558892	165625128	66237	Loss	Yes	-	-
Case	139	3q26.1	3	167268104	167427320	159217	Gain	Yes	-	-
Case	291	3q27.3	3	187888832	187900465	11634	Loss	Yes	-	-
Case	139	3q28	3	192518483	192546703	28221	Gain	Yes	<i>CCDC50</i>	-
Case	77	3q28	3	192525996	192546703	20708	Gain	Yes	<i>CCDC50</i>	-
Case	167	3q28	3	193421039	193436511	15473	Loss	Yes	-	-
Case	268	3q29	3	196942560	197150083	207524	Gain	Yes	<i>MUC20; MUC4; TNK2</i>	hsa-miR-6829- 5p; hsa-miR- 6829-3p
Case	268	3q29	3	198870678	199278747	408070	Gain		<i>KIAA0226; FYTTD1; LRCH3; IQCG; RPL35A; LMLN</i>	hsa-miR-922
Case	144	3q29	3	199301242	199322975	21734	Gain	Yes	-	-
Case	234	4p16.3	4	220237	269903	49667	Loss	Yes	<i>ZNF732</i>	-
Case	100	4p16.3	4	2994521	3025891	31371	Loss	Yes	<i>GRK4</i>	-
Case	169	4p16.2	4	3439241	3452835	13595	Gain	Yes	<i>DOK7</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	240	4p16.2	4	3592848	3633261	40414	Loss	Yes	-	-
Case	67	4p16.1	4	6177450	6189553	12104	Loss	Yes	-	-
Case	246	4p16.1	4	8775443	9024929	249487	Loss		<i>USP17L10; USP17L11; USP17L12; USP17L13; USP17L17; USP17L18; USP17L19; USP17L20; USP17L21; USP17L22; USP17L24; USP17L25; USP17L26; USP17L27; USP17L28; USP17L29; USP17L30; USP17L5; USP17L15</i>	-
Case	174	4p16.1	4	9088444	9189110	100667	Loss	Yes	<i>LOC650293</i>	hsa-miR-548i
Case	98	4p16.1	4	9205016	9451415	246400	Gain		<i>DRD5; SLC2A9</i>	-
Case	174	4p16.1	4	9241546	9307755	66210	Loss	Yes	-	-
Case	98	4p16.1	4	9480098	9763314	283217	Gain		<i>SLC2A9; WDR1</i>	hsa-miR-3138
Case	98	4p16.1	4	9847534	10116451	268918	Gain	Yes	<i>ZNF518B; CLNK</i>	-
Case	274	4p15.33	4	14518911	14548584	29674	Loss	Yes	-	-
Case	9	4p15.32	4	15391461	15435236	43776	Gain		<i>CD38</i>	-
Case	173	4p15.1	4	32685825	32703314	17490	Gain		-	-
Case	264	4p15.1	4	32879712	32899850	20139	Gain	Yes	-	-
Case	115	4p15.1	4	33697640	33730673	33034	Loss	Yes	-	-
Case	299	4p15.1	4	33697640	33743900	46261	Loss	Yes	-	-
Case	314	4p14	4	38140013	38213466	73454	Loss	Yes	-	-
Case	337	4p14	4	38140888	38213466	72579	Loss	Yes	-	-
Case	173	4p13	4	42422451	42435421	12971	Loss		-	-
Case	340	4p13	4	43862525	43881584	19060	Loss		<i>KCTD8</i>	-
Case	298	4p13	4	44621177	44633944	12768	Loss	Yes	-	-
Case	248	4q12	4	58332338	58368150	35813	Loss	Yes	-	-
Case	57	4q12	4	58444799	58455569	10771	Loss	Yes	-	-
Case	99	4q13.1	4	59207348	59249408	42061	Gain	Yes	-	-
Case	214	4q13.1	4	60068549	60229014	160466	Gain	Yes	-	-
Case	321	4q13.1	4	60766822	60793824	27003	Loss	Yes	-	-
Case	229	4q13.1	4	64334768	64376535	41768	Gain	Yes	-	-
Case	194	4q13.2	4	69707310	69751804	44495	Gain	Yes	<i>UGT2B10</i>	-
Case	303	4q13.3	4	70517631	70551260	33630	Loss		<i>UGT2A1; UGT2A2</i>	-
Case	189	4q13.3	4	73223254	73342908	119655	Loss	Yes	<i>NPF2FR2</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	209	4q21.21	4	80797572	80889069	91498	Loss	-		-
Case	147	4q21.21	4	81920021	81957683	37663	Loss	Yes		-
Case	166	4q22.2	4	94085769	94141894	56126	Loss	Yes		-
Case	250	4q22.3	4	98740286	98830743	90458	Loss	Yes		-
Case	392	4q23	4	101181475	101219547	38073	Loss	-		-
Case	156	4q24	4	104426263	104467383	41121	Loss	-		-
Case	382	4q24	4	106681139	106720873	39735	Loss	-	<i>ARHGEF38</i>	-
Case	385	4q24	4	107505499	107604385	98887	Gain	-	<i>GIMD1</i>	-
Case	99	4q25	4	108846299	108989697	143399	Gain	Yes	<i>PAPSSI</i>	-
										hsa-miR-367-5p; hsa-miR-367-3p; hsa-miR-302d-5p; hsa-miR-302d-3p; hsa-miR-302a-5p; hsa-miR-302a-3p; hsa-miR-302c-5p; hsa-miR-302c-3p; hsa-miR-302b-5p; hsa-miR-302b-3p; hsa-miR-1243; hsa-miR-8082
Case	14	4q26, 4q25	4	113634704	114418145	783442	Gain	Yes	<i>NEUROG2; C4orf21; LARP7; ANK2</i>	-
Case	146	4q26	4	118343468	118752337	408870	Gain	Yes		-
Case	198	4q27, 4q28.1	4	123980237	124038240	58004	Loss	Yes	<i>FGF2; NUDT6</i>	-
Case	339	4q28.2	4	129993331	130153430	160100	Gain	-	<i>PHF17; SCLT1</i>	-
Case	185	4q28.2	4	129997526	130153430	155905	Gain	-	<i>PHF17; SCLT1</i>	-
Case	324	4q28.2	4	130986341	131009827	23487	Loss	Yes		-
Case	155	4q28.2	4	131182407	131223832	41426	Loss	Yes		-
Case	157	4q28.3	4	137654860	137693505	38646	Loss	Yes		-
Case	310	4q31.21	4	144923049	144938257	15209	Gain	Yes		-
Case	107	4q32.1	4	155804217	155904959	100743	Loss	Yes	<i>LRAT</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	42	4q32.1	4	156913775	157169828	256054	Gain	Yes	<i>GUCY1B3; ASIC5; TDO2; CTSO</i>	-
Case	351	4q32.1	4	160923945	161069584	145640	Gain	Yes	-	-
Case	175	4q32.2	4	161729790	161817817	88028	Loss	Yes	-	-
Case	88	4q33	4	171481893	171513411	31519	Gain	Yes	-	-
Case	15	4q33, 4q34.1	4	171556613	174249741	2693129	Loss	Yes	<i>GALNTL6</i>	hsa-miR-6082
Case	94	4q34.1	4	173073090	173099352	26263	Loss		-	-
Case	16	4q35.1,4q34.3	4	179878817	184222513	4343697	Gain	Yes	<i>TENM3; DCTD</i>	hsa-miR-1305
Case	81	4q34.3	4	181414070	181507983	93914	Loss	Yes	-	-
Case	274	4q34.3	4	181540506	181565740	25235	Loss	Yes	-	-
Case	10	4q34.3	4	181771567	181895178	123612	Loss	Yes	-	-
Case	193	4q35.2	4	189106355	189297604	191250	Loss		<i>ZFP42; TRIML2</i>	-
Case	325	4q35.2	4	189193113	189203823	10711	Loss	Yes	-	-
Case	360	4q35.2	4	191154279	191261904	107626	Gain		<i>FRG2; LOC100288255; DUX4; DUX4L2; DUX4L3; DUX4L4; DUX4L5; DUX4L6; DUX2; DUX4L7; LOC100653046</i>	-
Case	237	5p15.33	5	172787	214394	41608	Loss	Yes	<i>PLEKHG4B</i>	-
Case	263	5p15.33	5	854765	886628	31864	Loss		<i>ZDHHC11</i>	-
Case	17	5p15.33, 5p15.32	5	1864574	5552004	3687431	Loss	Yes	<i>NDUFS6; IRX4; IRX2; C5orf38; IRX1; ADAMTS16; KIAA0947</i>	-
Case	331	5p15.2	5	14068779	14105748	36970	Gain		-	-
Case	18	5p15.1	5	15134588	15763580	628993	Gain	Yes	<i>FBXL7</i>	-
Case	18	5p15.1	5	15791497	15921897	130401	Gain	Yes	-	-
Case	301	5p15.1	5	17695853	17734268	38416	Loss		-	-
Case	178	5p14.3	5	19051850	19137362	85513	Loss		-	-
Case	236	5p14.3	5	19904337	19991689	87353	Loss	Yes	-	-
Case	344	5p14.3	5	20460899	20473534	12636	Gain		-	-
Case	41	5p14.3	5	21885181	22025313	140133	Loss	Yes	<i>CDH12</i>	-
Case	385	5p14.3	5	22615789	22764291	148503	Loss		-	-
Case	211	5p14.1	5	28841774	28877422	35649	Loss	Yes	-	-
Case	271	5p13.3	5	30853465	30867734	14270	Loss	Yes	-	-
Case	176	5p13.3	5	31496174	31540028	43855	Gain	Yes	<i>DROSHA</i>	-
Case	87	5p13.3	5	31848970	31863182	14213	Loss	Yes	-	-
Case	52	5p13.3	5	32650075	32758256	108182	Gain	Yes	<i>NPR3</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	257	5p13.2	5	35058791	35130051	71261	Gain	Yes	<i>AGXT2; PRLR</i>	-
Case	19	5p13.2	5	37294917	37815266	520350	Gain		<i>NUP155; WDR70</i>	-
Case	180	5p12	5	45120197	45260142	139946	Gain	Yes	-	-
Case	123	5q11.2	5	55242804	55254433	11630	Loss	Yes	<i>IL31RA</i>	-
Case	165	5q11.2	5	57267432	57288846	21415	Gain	Yes	-	-
Case	20	5q14.1, 5q13.3	5	74706210	77470646	2764437	Gain	Yes	<i>COL4A3BP; POLK; ANKDD1B; POC5; SV2C; IQGAP2; F2RL2; F2R; F2RL1; SI00Z; CRHBP; AGGF1; ZBED3; PDE8B; WDR41; OTP; TBCA; AP3B1</i>	-
Case	8	5q13.3	5	74982274	75021366	39093	Loss	Yes	<i>ANKDD1B; POC5</i>	-
Case	145	5q13.3	5	75467195	75486315	19121	Gain		-	-
Case	17	5q13.3	5	75467195	75486315	19121	Gain		-	-
Case	81	5q14.2	5	81927571	82055764	128194	Loss	Yes	-	-
Case	285	5q14.3	5	82914275	82957006	42732	Loss	Yes	-	-
Case	239	5q14.3	5	85988420	86039926	51507	Loss	Yes	-	-
Case	54	5q15	5	93663089	93717035	53947	Loss	Yes	-	-
Case	18	5q21.1	5	99559429	99644415	84987	Gain		-	-
Case	71	5q21.1	5	99631884	99821543	189660	Loss	Yes	-	-
Case	18	5q21.1	5	99772883	99871322	98440	Loss		-	-
Case	367	5q21.1	5	100461469	100518240	56772	Loss		-	-
Case	197	5q21.1	5	100461469	100514941	53473	Loss		-	-
Case	18	5q21.1	5	101307665	101373741	66077	Gain	Yes	-	-
Case	286	5q21.1	5	101503526	101559228	55703	Loss		-	-
Case	303	5q21.1	5	101503526	101569442	65917	Loss		-	-
Case	324	5q21.1	5	101503526	101550136	46611	Loss		-	-
Case	353	5q21.2	5	103554051	103602049	47999	Gain	Yes	-	-
Case	285	5q21.2	5	104299502	104338294	38793	Loss		-	-
Case	31	5q21.2	5	104301130	104326608	25479	Loss		-	-
Case	271	5q21.3,5q21.2	5	104494771	104511686	16916	Loss	Yes	-	-
Case	257	5q21.3	5	106883108	106893242	10135	Loss	Yes	-	-
Case	122	5q21.3	5	108894924	109175855	280932	Gain	Yes	<i>MAN2A1</i>	-
Case	297	5q22.1	5	111470610	111486846	16237	Gain	Yes	-	-
Case	123	5q22.3	5	113626945	113687846	60902	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	190	5q22.3	5	113956183	114003928	47746	Loss	-		-
Case	105	5q23.1	5	115624176	115654919	30744	Loss	Yes	-	-
Case	131	5q23.1	5	117226687	117275670	48984	Loss	Yes	-	-
Case	255	5q23.1	5	117889295	117946086	56792	Loss	Yes	-	-
Case	45	5q23.1	5	117994411	118022253	27843	Loss	Yes	-	-
Case	8	5q23.1	5	119038846	119067837	28992	Loss	Yes	-	-
Case	363	5q23.1	5	120083229	120099754	16526	Gain	-	-	-
Case	180	5q23.1	5	120083229	120099754	16526	Gain	-	-	-
Case	203	5q23.1	5	120083229	120099754	16526	Gain	-	-	-
Case	191	5q23.1	5	121053695	121063821	10127	Loss	-	-	-
Case	273	5q23.2	5	124419299	124431136	11838	Loss	Yes	-	-
Case	255	5q23.2	5	126918371	126944061	25691	Gain	Yes	-	-
Case	260	5q23.3	5	129285653	129299431	13779	Loss	Yes	-	-
Case	36	5q33.1	5	150157290	150198797	41508	Loss	Yes	-	-
Case	129	5q33.1	5	151563301	151579307	16007	Loss	Yes	-	-
Case	308	5q33.1	5	151565320	151579307	13988	Loss	Yes	-	-
Case	288	5q33.1	5	151643567	151680663	37097	Loss	Yes	-	-
Case	323	5q33.1	5	151953804	151991698	37895	Loss	Yes	-	-
Case	57	5q33.2	5	152324136	152342899	18764	Loss	Yes	-	-
Case	325	5q33.2	5	155094943	155498190	403248	Gain	Yes	-	-
Case	33	5q33.3	5	157856228	157886797	30570	Loss	Yes	-	-
Case	108	5q34	5	162568797	162607658	38862	Gain	Yes	-	-
Case	254	5q34	5	165771452	165782533	11082	Loss	Yes	-	-
Case	132	5q34	5	165772240	165782533	10294	Loss	Yes	-	-
Case	330	5q35.3	5	180043394	180148872	105479	Gain	-	<i>OR2Y1</i>	-
Case	245	5q35.3	5	180048423	180148872	100450	Gain	-	<i>OR2Y1</i>	-
Case	250	5q35.3	5	180048423	180148872	100450	Gain	-	<i>OR2Y1</i>	-
Case	85	5q35.3	5	180444921	180496467	51547	Loss	Yes	-	-
Case	153	6p25.3	6	356110	367736	11627	Gain	-	-	-
Case	19	6p25.3	6	436568	649424	212857	Gain	-	<i>EXOC2; HUS1B</i>	-
Case	196	6p25.3	6	827436	906967	79532	Gain	Yes	-	-
Case	84	6p25.3	6	2051308	2195882	144575	Loss	Yes	<i>GMDS</i>	-
Case	332	6p22.3	6	19881532	19898958	17427	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	161	6p22.2	6	23873630	23884488	10859	Loss	-	-	-
Case	182	6p22.1	6	26481657	26513969	32313	Gain	Yes	<i>BTN3A2; BTN2A2; BTN3A1</i>	-
Case	274	6p22.1	6	29031959	29450804	418846	Gain		<i>ZNF311; OR2W1; LOC100129636; OR2B3; OR2J3; OR2J2; OR14J1; OR5V1; OR12D3</i>	-
Case	63	6p22.1	6	29076909	29263728	186820	Loss		<i>ZNF311; OR2W1; LOC100129636; OR2B3; OR2J3; OR2J2</i>	-
Case	72	6p21.33	6	31459866	31510976	51111	Loss	Yes	<i>MICA</i>	-
Case	72	6p21.32	6	32871866	32918421	46556	Loss	Yes	<i>HLA-DOB; TAP2; PSMB8</i>	-
Case	267	6p21.32	6	33072945	33230309	157365	Loss	Yes	<i>HLA-DOA; HLA-DPA1; HLA-DPBI</i>	-
Case	63	6p21.32	6	33583731	33598395	14665	Loss	Yes	-	-
Case	335	6p21.32	6	33584696	33598395	13700	Loss	Yes	-	-
Case	95	6p21.31	6	34175770	34218808	43039	Gain	Yes	<i>GRM4</i>	-
Case	72	6p21.31	6	35860770	35909323	48554	Loss	Yes	<i>CLPSL1; CLPS; LHFPL5</i>	-
Case	242	6p21.1	6	45071609	45174789	103181	Loss	Yes	<i>SUPT3H</i>	-
Case	119	6p21.1	6	45099365	45146028	46664	Loss		-	-
Case	375	6p12.3,6p21.1	6	45104704	45224239	119536	Loss	Yes	<i>SUPT3H</i>	-
Case	328	6p21.1	6	45104704	45147409	42706	Loss		-	-
Case	231	6p12.3,6p21.1	6	45129193	45427854	298662	Loss	Yes	<i>SUPT3H; RUNX2</i>	hsa-miR-586
Case	323	6p12.1	6	54685768	54696028	10261	Loss	Yes	-	-
Case	94	6p12.1	6	56267767	56594166	326400	Loss	Yes	<i>DST</i>	-
Case	22	6q11.1	6	61944399	62975943	1031545	Gain	Yes	<i>KHDRBS2</i>	-
Case	23	6q11.1	6	61944399	62447384	502986	Gain		-	-
Case	76	6q11.1	6	62867842	62933146	65305	Loss	Yes	-	-
Case	97	6q11.1	6	62929151	63392084	462934	Gain	Yes	<i>KHDRBS2</i>	-
Case	338	6q11.2, 6q12	6	63462641	63548563	85923	Gain	Yes	-	-
Case	294	6q12	6	65613806	65925839	312034	Loss		<i>EYS</i>	-
Case	135	6q12	6	65842260	65871859	29600	Loss		-	-
Case	78	6q13	6	70265826	70280028	14203	Loss	Yes	-	-
Case	142	6q13	6	70308225	70323543	15319	Loss		-	-
Case	101	6q13	6	75564098	75591301	27204	Loss	Yes	-	-
Case	342	6q14.1	6	82841833	82856591	14759	Loss	Yes	-	-
Case	343	6q14.1	6	83583008	83611270	28263	Gain		-	-
Case	24	6q14.3	6	86804893	87382048	577156	Gain	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	24	6q15, 6q14.3	6	87411226	87696919	285694	Gain	Yes	-	-
Case	182	6q15	6	89894102	89946180	52079	Loss	Yes	<i>PM20D2; GABRR1</i>	-
Case	280	6q16.1	6	95499210	95543872	44663	Loss	Yes	-	-
Case	11	6q16.1	6	95602570	95616875	14306	Gain		-	-
Case	25	6q16.2, 6q16.3	6	98969135	100377167	1408033	Gain	Yes	<i>USP45; TSTD3; CCNC; PRDM13; POU3F2; FBXL4; FAXC; COQ3; PNISR</i>	hsa-miR-548ai
Case	221	6q16.3	6	100654517	100720272	65756	Gain		-	-
Case	62	6q16.3	6	103237557	103262485	24929	Loss	Yes	-	-
Case	287	6q16.3	6	103749255	103844668	95414	Gain	Yes	-	-
Case	147	6q21	6	107238501	107273248	34748	Loss	Yes	-	-
Case	343	6q22.1, 6q21	6	113810260	113906649	96390	Gain	Yes	-	-
Case	369	6q22.2	6	117837285	117848188	10904	Gain		<i>ROS1</i>	-
Case	239	6q24.2	6	144516701	144537619	20919	Loss	Yes	-	-
Case	177	6q26	6	160951755	160989032	37278	Gain		<i>LPA</i>	-
Case	274	6q26	6	162328128	162365931	37804	Loss	Yes	-	-
Case	369	6q26	6	162543883	162567234	23352	Loss		-	-
Case	251	6q27	6	165015262	165110805	95544	Loss	Yes	-	-
Case	93	6q27	6	168078127	168196892	118766	Gain	Yes	<i>MLLT4; HGC6.3; KIF25</i>	-
Case	93	6q27	6	168236886	168336359	99474	Gain	Yes	-	-
Case	150	7p22.3	7	215461	276737	61277	Loss	Yes	-	-
Case	127	7p22.3	7	274271	294586	20316	Loss		<i>FAM20C</i>	-
Case	333	7p22.3	7	274271	294586	20316	Loss		<i>FAM20C</i>	-
Case	157	7p22.2	7	3100628	3125861	25234	Loss	Yes	-	-
Case	64	7p22.1, 7p22.2	7	4473499	4509826	36328	Loss	Yes	-	-
Case	199	7p22.1	7	5102874	5142541	39668	Loss	Yes	-	-
Case	27	7p21.3	7	9573572	10653767	1080196	Gain	Yes	-	-
Case	26	7p21.3	7	9580685	10400068	819384	Loss		-	-
Case	126	7p21.3	7	11719807	11769283	49477	Gain	Yes	-	-
Case	147	7p21.3	7	12267347	12355918	88572	Gain	Yes	<i>VWDE</i>	-
Case	297	7p21.3	7	13077594	13208875	131282	Loss		-	-
Case	240	7p21.1	7	15252901	15394987	142087	Loss		<i>AGMO</i>	-
Case	347	7p21.1	7	15271281	15383317	112037	Loss		<i>AGMO</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	182	7p21.1	7	15338457	15419944	81488	Loss	Yes	<i>AGMO</i>	-
Case	270	7p21.1	7	15369491	15391936	22446	Loss		<i>AGMO</i>	-
Case	301	7p21.1	7	15714208	15730998	16791	Loss	Yes	-	-
Case	92	7p21.1	7	17914329	17939036	24708	Loss	Yes	-	-
Case	11	7p15.2	7	27316733	27360043	43311	Gain	Yes	-	-
Case	109	7p15.1	7	31491777	31507262	15486	Gain	Yes	-	-
Case	171	7p14.3	7	34133531	34150905	17375	Loss	Yes	<i>BMPER</i>	-
Case	120	7p14.1	7	38246749	38353316	106568	Loss	Yes	<i>TARP</i>	-
Case	165	7p14.1	7	38246749	38353316	106568	Loss	Yes	<i>TARP</i>	-
Case	163	7p14.1	7	38260626	38296343	35718	Loss		<i>TARP</i>	-
Case	163	7p14.1	7	38315337	38325481	10145	Loss	Yes	-	-
Case	108	7p14.1	7	40303634	40351100	47467	Loss	Yes	<i>C7orf10</i>	-
Case	199	7p12.3	7	46895854	46956322	60469	Gain	Yes	-	-
Case	138	7p12.3	7	48552398	48573909	21512	Loss	Yes	-	-
Case	110	7q11.21	7	61365842	61474014	108173	Gain	Yes	-	-
Case	87	7q11.21	7	61714736	61761509	46774	Loss		-	-
Case	87	7q11.21	7	61818545	62303039	484495	Loss	Yes	-	-
Case	56	7q11.21	7	63163680	63433451	269772	Loss		<i>ZNF727; ZNF735; ZNF679; ZNF736</i>	-
Case	125	7q11.21	7	64703608	64785847	82240	Loss		-	-
Case	1	7q11.22	7	69827248	69843389	16142	Loss	Yes	-	-
Case	126	7q11.22	7	70886612	70907066	20455	Gain		<i>CALN1</i>	-
Case	223	7q11.22	7	71331369	71463097	131729	Loss	Yes	<i>CALN1</i>	-
Case	143	7q21.11	7	80467338	80517630	50293	Loss		-	-
Case	305	7q21.11	7	80482086	80517630	35545	Loss		-	-
Case	166	7q21.11	7	81829583	82016914	187332	Gain	Yes	<i>CACNA2D1</i>	-
Case	249	7q21.11	7	81829583	82154832	325250	Gain		<i>CACNA2D1</i>	-
Case	195	7q21.11	7	83380795	83468436	87642	Gain	Yes	<i>SEMA3A</i>	-
Case	251	7q21.11	7	85286106	85325193	39088	Gain	Yes	-	-
Case	251	7q21.11	7	85454163	85571387	117225	Loss	Yes	-	-
Case	349	7q21.13	7	88203436	88321523	118088	Gain		<i>ZNF804B; C7orf62</i>	-
Case	348	7q21.3	7	93484277	93554199	69923	Gain	Yes	-	-
Case	229	7q22.1	7	102630698	102656246	25549	Loss		-	-
Case	131	7q22.1	7	103178239	103268966	90728	Loss	Yes	<i>RELN</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	155	7q31.1	7	108376431	108466448	90018	Loss	Yes	-	-
Case	358	7q31.1	7	110824661	110870077	45417	Loss		-	-
Case	199	7q31.1	7	110879700	110924988	45289	Loss	Yes	<i>IMMP2L</i>	-
Case	217	7q31.31	7	117922977	117952715	29739	Loss		-	-
Case	28	7q31.31	7	118515093	119719187	1204095	Gain		<i>KCND2</i>	-
Case	300	7q31.31	7	118639612	118813258	173647	Loss		-	-
Case	14	7q31.31	7	118639612	118813258	173647	Loss		-	-
Case	344	7q31.33	7	126239994	126323049	83056	Loss		-	-
Case	135	7q33	7	135552085	135636640	84556	Gain	Yes	-	-
Case	81	7q33	7	136134010	136153874	19865	Loss	Yes	-	-
Case	259	7q34	7	138022379	138044041	21663	Loss	Yes	<i>ATP6V0A4</i>	-
Case	191	7q34	7	141374565	141395819	21255	Loss	Yes	<i>MGAM</i>	-
Case	169	7q35	7	142989313	143028975	39663	Gain	Yes	-	-
Case	250	7q35	7	143141990	143163931	21942	Gain		-	-
Case	192	7q35	7	143780166	143807844	27679	Loss	Yes	<i>TPK1</i>	-
Case	360	7q35	7	144635225	144649727	14503	Loss		-	-
Case	222	7q35	7	144635225	144649727	14503	Loss		-	-
Case	212	7q35	7	145374940	145504520	129581	Loss		<i>CNTNAP2</i>	-
Case	30	7q35	7	145620226	145725609	105384	Loss		-	-
Case	139	7q35	7	145853110	145885593	32484	Gain		-	-
Case	243	7q35	7	145857231	145889771	32541	Gain		-	-
Case	6	7q35	7	145857231	145885593	28363	Gain		-	-
Case	125	7q36.1	7	148547560	148568069	20510	Gain	Yes	<i>ZNF282; ZNF212</i>	-
Case	93	7q36.1	7	149425988	149440955	14968	Loss	Yes	-	-
Case	303	7q36.1	7	149425988	149440955	14968	Loss	Yes	-	-
Case	315	7q36.2	7	153844249	154051446	207198	Loss		<i>DPP6</i>	-
Case	273	8p23.3	8	177446	243531	66086	Gain	Yes	<i>ZNF596</i>	-
Case	29	8p23.3	8	439294	1172602	733309	Gain	Yes	<i>TDRP; ERICH1</i>	-
Case	350	8p23.3	8	1357659	1375303	17645	Loss	Yes	-	-
Case	258	8p23.3	8	1667092	1758170	91079	Gain	Yes	<i>CLN8</i>	hsa-miR-3674; hsa-miR-596
Case	88	8p23.3	8	2089352	2120782	31431	Loss	Yes	-	-
Case	237	8p23.2	8	2582631	2655988	73358	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	139	8p23.2	8	3102233	3116419	14187	Loss	-		-
Case	178	8p23.2	8	3102233	3115581	13349	Loss	-		-
Case	210	8p23.2	8	3156758	3221879	65122	Loss	Yes	<i>CSMD1</i>	-
Case	82	8p23.2	8	3345017	3358080	13064	Loss	Yes	-	-
Case	152	8p23.2	8	3347622	3364437	16816	Loss	Yes	-	-
Case	260	8p23.2	8	3881288	3973702	92415	Loss	Yes	-	-
Case	54	8p23.2	8	3901833	4019228	117396	Loss	Yes	-	-
Case	85	8p23.2	8	5659866	5685911	26046	Loss	-	-	-
Case	299	8p23.1	8	6217216	6243941	26726	Loss	Yes	-	-
Case	46	8p23.1	8	7174042	7285606	111565	Gain	Yes	<i>USP17L1P; USP17L4; ZNF705G; DEFB4B; DEFB103A; DEFB103B</i>	-
Case	63	8p23.1	8	7836262	7847316	11055	Gain	-	<i>ZNF705B</i>	-
Case	222	8p23.1	8	8300892	8339794	38903	Loss	-	-	-
Case	25	8p23.1	8	9410926	9423620	12695	Loss	Yes	-	-
Case	361	8p23.1	8	10629211	10841027	211817	Gain	-	<i>PINX1; XKR6</i>	hsa-miR-1322
Case	102	8p23.1	8	11430289	11465046	34758	Gain	-	<i>BLK</i>	-
Case	317	8p23.1	8	12402552	12487426	84875	Loss	Yes	-	-
Case	156	8p23.1	8	12483119	12526418	43300	Loss	-	-	-
Case	238	8p22	8	12862253	12888812	26560	Gain	-	-	-
Case	310	8p22	8	12864210	12884785	20576	Gain	-	-	-
Case	328	8p22	8	13825280	13840561	15282	Loss	Yes	-	-
Case	90	8p22	8	14847313	14866894	19582	Loss	-	-	-
Case	352	8p21.3	8	19805543	19824144	18602	Loss	Yes	-	-
Case	121	8p21.3	8	20208197	20476996	268800	Gain	Yes	-	-
Case	75	8p21.3	8	22265902	22432679	166778	Gain	Yes	<i>PIWIL2; SLC39A14; PPP3CC</i>	-
Case	76	8p21.3	8	22265902	22432679	166778	Gain	Yes	<i>PIWIL2; SLC39A14; PPP3CC</i>	-
Case	235	8p21.2	8	24311240	24338666	27427	Loss	Yes	<i>ADAMDECI</i>	-
Case	165	8p21.1	8	28671412	28729336	57925	Gain	Yes	<i>INTS9</i>	-
Case	266	8p21.1	8	28673431	28744299	70869	Gain	Yes	<i>INTS9</i>	-
Case	96	8p12	8	31839032	31914256	75225	Gain	Yes	-	-
Case	17	8p12	8	33295295	33313563	18269	Loss	-	-	-
Case	181	8p12	8	34540599	34563968	23370	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	30	8p11.21, 8p11.1	8	43132979	43905959	772981	Gain		<i>HGSNAT; POTEA</i>	-
Case	373	8q11.21	8	48335451	48391592	56142	Gain		<i>KIAA0146</i>	-
Case	210	8q11.23	8	54038036	54083875	45840	Gain	Yes	-	-
Case	254	8q12.1	8	58241101	58280040	38940	Loss	Yes	-	-
Case	31	8q12.1	8	60901679	61668467	766789	Gain	Yes	<i>CA8; RAB2A</i>	-
Case	66	8q12.3	8	63490044	63515695	25652	Loss	Yes	-	-
Case	18	8q13.3	8	71777229	71793543	16315	Loss		<i>XKR9</i>	-
Case	337	8q13.3	8	71777229	71794424	17196	Loss		<i>XKR9</i>	-
Case	64	8q13.3	8	72587883	72627420	39538	Gain	Yes	-	-
Case	227	8q21.11	8	74777113	74806246	29134	Loss	Yes	<i>STAU2</i>	-
Case	300	8q21.12	8	78775076	78853955	78880	Loss	Yes	-	-
Case	305	8q21.12	8	78926709	78965879	39171	Loss	Yes	-	-
Case	288	8q21.12	8	79309837	79369973	60137	Gain	Yes	-	-
Case	24	8q21.13	8	83904905	83934811	29907	Loss		-	-
Case	217	8q21.13	8	83904905	83934811	29907	Loss		-	-
Case	290	8q21.2	8	86726773	86744665	17893	Gain	Yes	-	-
Case	32	8q21.3	8	89566045	90639425	1073381	Gain	Yes	-	-
Case	48	8q21.3	8	89879454	89918309	38856	Loss	Yes	-	-
Case	111	8q21.3	8	90595439	90616240	20802	Gain	Yes	-	-
Case	27	8q21.3	8	90595439	90616240	20802	Gain	Yes	-	-
Case	32	8q21.3	8	90684909	90786498	101590	Gain	Yes	-	-
Case	70	8q21.3	8	90906777	90935078	28302	Loss	Yes	-	-
Case	288	8q21.3	8	92180506	92256189	75684	Loss		<i>LRRC69</i>	-
Case	133	8q23.3	8	115386857	115445017	58161	Loss		-	-
Case	195	8q23.3	8	115386857	115445017	58161	Loss		-	-
Case	331	8q23.3	8	115386857	115445017	58161	Loss		-	-
Case	251	8q23.3	8	116253636	116325442	71807	Loss	Yes	-	-
Case	110	8q24.13	8	124808752	125129092	320341	Gain	Yes	<i>ANXA13; FAM91A1; FER1L6</i>	-
Case	53	8q24.13	8	126247193	126271736	24544	Loss	Yes	<i>NSMCE2</i>	-
Case	183	8q24.21	8	130655502	130969212	313711	Gain	Yes	<i>GSDMC; FAM49B</i>	-
Case	104	8q24.23	8	137487708	137705417	217710	Loss	Yes	-	-
Case	137	8q24.23	8	138322016	138430764	108749	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	305	8q24.23	8	138328381	138430764	102384	Loss	Yes	-	-
Case	315	8q24.23	8	138328381	138430764	102384	Loss	Yes	-	-
Case	163	8q24.23	8	139134676	139171118	36443	Loss	Yes	-	-
Case	162	8q24.23	8	139827235	139837267	10033	Loss	Yes	<i>COL22A1</i>	-
Case	235	8q24.3	8	142344394	142473801	129408	Gain	Yes	<i>GPR20</i>	-
Case	336	8q24.3	8	146139682	146218176	78495	Gain		<i>ZNF16</i>	-
Case	51	8q24.3	8	146174150	146268959	94810	Gain		<i>C8orf33</i>	-
Case	275	9p24.3	9	83270	139480	56211	Gain		<i>FOXD4; CBWD1</i>	-
Case	336	9p24.3	9	508099	629147	121049	Loss		-	-
Case	166	9p24.3	9	1636820	1746470	109651	Loss	Yes	-	-
Case	168	9p24.3	9	1712942	1748705	35764	Gain	Yes	-	-
Case	319	9p24.2	9	2223969	2354269	130301	Loss	Yes	-	-
Case	181	9p24.2	9	2253373	2678522	425150	Gain		<i>VLDLR</i>	-
Case	99	9p24.2	9	4250863	4263941	13079	Loss		-	-
Case	371	9p24.2	9	4250863	4263941	13079	Loss		-	-
Case	393	9p24.2	9	4250863	4263941	13079	Loss		-	-
Case	322	9p24.2	9	4371509	4438454	66946	Loss	Yes	-	-
Case	7	9p24.1, 9p24.2	9	4527834	5014492	486659	Loss	Yes	<i>SLC1A1; SPATA6L; PPAPDC2; CDC37L1; AK3; RCL1; JAK2</i>	hsa-miR-101- 3p
Case	77	9p24.1	9	5014345	5096705	82361	Gain	Yes	<i>JAK2</i>	-
Case	170	9p24.1	9	5375779	5388011	12233	Loss		-	-
Case	186	9p24.1	9	5375779	5388011	12233	Loss		-	-
Case	188	9p24.1	9	5375779	5388011	12233	Loss		-	-
Case	40	9p24.1	9	5375779	5388011	12233	Loss		-	-
Case	335	9p24.1	9	5375779	5388011	12233	Loss		-	-
Case	225	9p24.1	9	6206925	6236144	29220	Loss	Yes	<i>IL33</i>	-
Case	264	9p24.1	9	6735563	6854377	118815	Gain		<i>KDM4C</i>	-
Case	77	9p24.1	9	7929394	7952518	23125	Gain	Yes	-	-
Case	10	9p24.1	9	8010572	8092978	82407	Loss	Yes	-	-
Case	230	9p23	9	9758713	9785428	26716	Gain	Yes	-	-
Case	89	9p23	9	9819046	9979684	160639	Loss		-	-
Case	362	9p23	9	9931673	9953879	22207	Loss		-	-
Case	62	9p23	9	11247448	11271192	23745	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	263	9p23	9	11722406	11843647	121242	Loss	-		-
Case	282	9p23	9	11753878	11843647	89770	Loss	-		-
Case	154	9p23	9	11994261	12025563	31303	Loss	Yes	-	-
Case	110	9p23	9	13733088	13822100	89013	Loss	Yes	-	-
Case	313	9p22.2	9	16938400	16953863	15464	Loss	Yes	-	-
Case	144	9p22.2	9	17614700	17662390	47691	Loss	Yes	-	-
Case	249	9p21.3	9	19931032	20019294	88263	Gain	Yes	-	-
Case	331	9p21.3	9	20007578	20051906	44329	Loss	Yes	-	-
Case	129	9p21.3	9	23068341	23084676	16336	Loss	-	-	-
Case	85	9p21.3	9	23160527	23190174	29648	Gain	Yes	-	-
Case	157	9p21.1	9	28559575	28575282	15708	Loss	Yes	-	-
Case	256	9p21.1	9	28764737	29075968	311232	Loss	Yes	-	hsa-miR-876-5p; hsa-miR-876-3p; hsa-miR-873-5p; hsa-miR-873-3p
Case	156	9p21.1	9	28963345	28979497	16153	Loss	Yes	-	-
Case	144	9p21.1	9	30050380	30088140	37761	Loss	Yes	-	-
Case	33	9p21.1	9	30791693	31341315	549623	Loss	Yes	-	-
Case	12	9p21.1	9	32237350	32329478	92129	Loss	Yes	-	-
Case	34	9p13.3, 9p13.2	9	36173229	37035664	862436	Loss	Yes	<i>CLTA; GNE; RNF38; MELK; PAX5</i>	hsa-miR-4475; hsa-miR-4540; hsa-miR-4476
Case	125	9p13.2	9	37036475	37082433	45959	Gain	Yes	-	-
Case	185	9p13.1	9	38014458	38443584	429127	Gain	Yes	<i>SHB; ALDH1B1; IGF1</i>	-
Case	172	9p12	9	40519803	40781515	261713	Loss	Yes	<i>SPATA31A3; ZNF658</i>	-
Case	63	9p12	9	41590614	41975187	384574	Gain	Yes	-	-
Case	11	9p11.2	9	44054868	44181813	126946	Loss	-	-	-
Case	36	9p11.2	9	44936301	45506515	570215	Gain	Yes	-	-
Case	172	9q12	9	66405631	67489865	1084235	Loss	-	-	-
Case	351	9q12	9	67665657	67678367	12711	Gain	-	-	-
Case	387	9q12	9	67665657	67678367	12711	Gain	-	-	-
Case	352	9q12	9	67665657	67678367	12711	Gain	-	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	275	9q21.11	9	70936073	71057233	121161	Gain	Yes	<i>TJP2</i>	-
Case	38	9q21.11, 9q21.12	9	72107555	73072111	964557	Loss	Yes	<i>SMC5; KLF9; TRPM3</i>	hsa-miR-204- 5p; hsa-miR- 204-3p
Case	114	9q21.13, 9q21.12	9	73090924	73131120	40197	Loss	Yes	-	-
Case	195	9q21.13	9	76395452	76431510	36059	Loss	Yes	-	-
Case	304	9q21.32	9	84554591	84574064	19474	Loss	Yes	-	-
Case	191	9q21.33	9	88216358	88229203	12846	Gain		-	-
Case	334	9q22.31	9	93283388	93299295	15908	Loss	Yes	-	-
Case	11	9q31.1	9	104718734	104788301	69568	Loss	Yes	-	-
Case	127	9q31.1	9	104753852	105039017	285166	Gain	Yes	<i>CYLC2</i>	-
Case	299	9q31.1	9	105522059	105552367	30309	Loss	Yes	-	-
Case	150	9q31.2	9	107722843	108073934	351092	Gain	Yes	-	-
Case	121	9q32	9	114756929	114826862	69934	Loss	Yes	<i>ZNF883</i>	-
Case	59	9q32	9	114756929	114826862	69934	Loss	Yes	<i>ZNF883</i>	-
Case	209	9q32	9	114756929	114830080	73152	Loss	Yes	<i>ZNF883</i>	-
Case	289	9q32	9	114764292	114785339	21048	Loss	Yes	-	-
Case	90	9q32	9	114796060	114860387	64328	Loss	Yes	<i>ZNF883; ZFP37</i>	-
Case	232	9q32	9	114835733	114860387	24655	Loss		<i>ZFP37</i>	-
Case	88	9q33.1	9	118553273	118564313	11041	Loss	Yes	-	-
Case	63	9q33.2	9	122810257	122835329	25073	Gain	Yes	<i>C5</i>	-
Case	255	9q33.2	9	123751370	123776271	24902	Gain	Yes	<i>TLL1</i>	-
Case	187	9q34.11	9	131107625	131126566	18942	Loss	Yes	<i>C9orf106</i>	-
Case	384	9q34.13	9	134588424	134729047	140624	Gain		<i>AK8</i>	-
Case	280	10p15.3	10	1925387	1975931	50545	Gain		-	-
Case	150	10p15.3	10	2394079	2757995	363917	Gain	Yes	-	-
Case	320	10p15.3	10	2411263	2532839	121577	Loss	Yes	-	-
Case	104	10p15.3	10	2631384	2642095	10712	Loss		-	-
Case	132	10p15.1	10	4018881	4174635	155755	Gain	Yes	-	hsa-miR-6078
Case	119	10p14	10	7672510	7684839	12330	Loss	Yes	-	-
Case	101	10p14	10	9050385	9171256	120872	Loss	Yes	-	-
Case	109	10p14	10	9121946	9159062	37117	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	39	10p13	10	12567080	12624215	57136	Loss	Yes	-	-
Case	62	10p13	10	13639905	13650873	10969	Loss	Yes	-	-
Case	322	10p12.33	10	19303986	19344499	40514	Loss	Yes	-	-
Case	348	10p12.32	10	20095312	20140825	45514	Loss	Yes	-	-
Case	92	10p12.31	10	22610397	22694681	84285	Gain	Yes	<i>COMMD3; COMMD3-BM11; BM11; SPAG6</i>	-
Case	208	10p12.1	10	24563795	24585439	21645	Gain		-	-
Case	228	10p11.22	10	31865783	31991902	126120	Gain	Yes	-	-
Case	39	10p11.22	10	33636052	34287407	651356	Gain	Yes	<i>NRP1</i>	-
Case	12	10q11.21	10	42184107	42241672	57566	Gain	Yes	-	-
									<i>PTPN20A; PTPN20B; SYT15; GPRIN2; NPY4R; ANXA8; ANXA8L1; FAM25B; FAM25C; FAM25G; AGAP9; ANXA8L2; FAM21B; ZNF488; RBP3; GDF2; GDF10; FRMPD2; MAPK8; ARHGAP22; WDFY4; LRRC18; VSTM4; FAM170B; C10orf128; C10orf71; DRGX; ERCC6; PGBD3; ERCC6- PGBD3; SLC18A3; CHAT; C10orf53; OGDHL; PARG; AGAP8; AGAP7; MSMB;</i>	
Case	40	10q11.22, 10q11.23	10	45905767	51329450	5423684	Gain	Yes	<i>NCOA4; TIMM23</i>	hsa-miR-4294
Case	241	10q21.1	10	55049737	55061803	12067	Gain	Yes	-	-
Case	162	10q21.1	10	59152157	59175448	23292	Gain	Yes	-	-
Case	182	10q21.2	10	63704691	63798139	93449	Gain	Yes	-	-
Case	251	10q21.3	10	68056854	68112828	55975	Loss		-	-
Case	216	10q21.3	10	68155579	68211267	55689	Loss	Yes	<i>CTNNA3</i>	-
Case	142	10q22.3	10	78178548	78200056	21509	Loss		-	-
Case	61	10q22.3	10	79728898	79923026	194129	Gain		-	-
Case	125	10q23.1	10	83932045	83949133	17089	Loss		-	-
Case	301	10q23.33	10	96621081	96750569	129489	Gain		<i>CYP2C9</i>	-
Case	307	10q24.32	10	103017023	103084996	67974	Gain	Yes	-	-
Case	369	10q24.33	10	105158016	105205006	46991	Gain		<i>PDCD11; CALHM2</i>	-
Case	214	10q24.33	10	105637085	105666815	29731	Loss	Yes	<i>OBFC1</i>	-
Case	274	10q25.1	10	109824374	109850732	26359	Loss	Yes	-	-
Case	334	10q25.1	10	109945939	109969070	23132	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	206	10q25.1	10	110080534	110101965	21432	Loss	Yes	-	-
Case	290	10q25.1	10	111488655	111573722	85068	Loss	Yes	-	-
Case	200	10q25.3	10	116351384	116368810	17427	Loss	Yes	<i>ABLIM1</i>	-
Case	354	10q26.12	10	122418404	122459873	41470	Gain	Yes	-	-
Case	6	10q26.3	10	132630798	132664292	33495	Loss	Yes	-	hsa-miR-378c
Case	381	10q26.3	10	133292806	133527333	234528	Gain		-	-
Case	252	11p15.5	11	196767	267099	70333	Gain	Yes	<i>BETIL; RIC8A; SIRT3; PSMD13</i>	hsa-miR-6743-5p; hsa-miR-6743-3p
Case	273	11p15.5	11	853088	1030891	177804	Gain	Yes	<i>AP2A2; MUC6; TSPAN4; CHID1</i>	-
Case	188	11p15.4	11	3817748	3829039	11292	Loss	Yes	-	-
Case	222	11p15.4	11	4762510	4866960	104451	Loss		<i>OR52R1; OR51F2; OR51S1; OR51T1</i>	-
Case	241	11p15.4	11	4931740	4943583	11844	Gain	Yes	<i>OR51A2</i>	-
Case	129	11p15.4	11	8449074	8459706	10633	Loss	Yes	<i>STK33</i>	-
Case	175	11p14.2, 11p14.3	11	25914227	26245377	331151	Gain	Yes	-	-
Case	201	11p13	11	31257606	31411551	153946	Loss	Yes	<i>DCDC1; DNAJC24; IMMP1L</i>	-
Case	335	11p13	11	34981897	35014363	32467	Gain		-	-
Case	349	11p12	11	42331884	42342944	11061	Loss	Yes	-	-
Case	192	11p11.12	11	49763600	50258820	495221	Gain		<i>OR4C13; OR4C12</i>	-
Case	34	11q11	11	54458221	54691830	233610	Gain	Yes	-	-
Case	41	11q11	11	54530469	55119916	589448	Gain		<i>TRIM48; OR4A16; OR4A15; OR4C15; OR4C16</i>	-
Case	213	11q11	11	55119916	55130607	10692	Loss		<i>OR4C11</i>	-
Case	41	11q11	11	55217259	55465680	248422	Gain		<i>OR5D13; OR5D14; OR5L1; OR5D18; OR5L2; OR5D16; TRIM51; OR5W2; OR511</i>	-
Case	105	11q12.1	11	56495254	56526065	30812	Gain	Yes	<i>OR5AK2</i>	-
Case	19	11q13.1	11	64972598	65095235	122638	Loss	Yes	<i>SCYL1; LTBP3; SSSCA1</i>	-
Case	72	11q13.1	11	65264181	65334918	70738	Loss	Yes	<i>AP5B1; OVOLI</i>	-
Case	213	11q14.1	11	81329992	81359233	29242	Gain	Yes	-	-
Case	57	11q14.1	11	81948607	81998696	50090	Gain	Yes	-	-
Case	196	11q14.2	11	87174421	87278637	104217	Loss	Yes	-	-
Case	240	11q21	11	92336224	92346836	10613	Loss	Yes	<i>MTNR1B</i>	-
Case	243	11q21	11	93360031	93643386	283356	Gain	Yes	<i>HEPHL1; PANX1</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	121	11q21	11	94017540	94138508	120969	Loss	Yes	-	-
Case	233	11q21	11	96445204	96464004	18801	Gain		-	-
Case	42	11q22.1	11	97224044	97850170	626127	Loss	Yes	-	-
Case	116	11q22.3	11	102848464	102885522	37059	Gain		<i>DYNC2H1</i>	-
Case	263	11q22.3	11	102848464	102885522	37059	Gain		<i>DYNC2H1</i>	-
Case	292	11q22.3	11	104563347	104696787	133441	Gain	Yes	-	-
Case	226	11q22.3	11	105006055	105018256	12202	Loss	Yes	-	-
Case	48	11q22.3	11	108644957	108735552	90596	Loss	Yes	-	-
Case	162	11q22.3	11	108644957	108735552	90596	Loss	Yes	-	-
Case	8	11q23.3	11	115758391	115790236	31846	Gain		-	-
Case	207	11q23.3	11	119716422	119955568	239147	Gain	Yes	<i>ARHGEF12</i>	-
Case	140	11q24.2	11	126708727	126877141	168415	Gain	Yes	-	-
Case	16	11q24.3	11	129166541	129279905	113365	Gain	Yes	<i>TMEM45B; NFRKB; PRDM10</i>	-
Case	16	11q24.3	11	129320742	129464893	144152	Gain	Yes	<i>PRDM10; APLP2</i>	-
Case	240	11q25	11	132329300	132771541	442242	Gain		-	-
Case	218	11q25	11	132595241	132824676	229436	Gain	Yes	-	-
Case	182	11q25	11	133763352	133922969	159618	Gain		-	-
Case	160	11q25	11	133852772	134123463	270692	Loss	Yes	-	-
Case	184	12p13.33	12	49098	113864	64767	Gain		<i>IQSEC3</i>	-
Case	78	12p13.33	12	865867	1023029	157163	Gain	Yes	<i>ERCI; WNK1; RAD52</i>	-
Case	50	12p13.33	12	1255099	1624685	369587	Loss	Yes	<i>ERCI; FBXL14; WNT5B</i>	-
Case	182	12p13.32	12	3246714	3282857	36144	Gain		<i>TSPAN9</i>	-
Case	145	12p13.32, 12p13.31	12	5173668	5353699	180032	Gain	Yes	-	-
Case	208	12p13.31	12	6837052	6911616	74565	Loss	Yes	<i>USP5; TPI1; SPSB2; LRRC23; ENO2</i>	-
Case	120	12p13.1	12	14701818	14748413	46596	Gain	Yes	<i>GUCY2C</i>	-
Case	131	12p12.2, 12p12.1	12	20899011	21301356	402346	Loss		<i>SLCO1B3; SLCO1B7; SLCO1B1</i>	-
Case	79	12p12.1	12	23826011	23837471	11461	Loss	Yes	-	-
Case	81	12p12.1	12	24063813	24088917	25105	Loss	Yes	-	-
Case	82	12p12.1	12	24561569	24597505	35937	Loss	Yes	-	-
Case	75	12p11.22	12	29097338	29113119	15782	Gain		-	-
Case	84	12p11.21	12	32679398	32727326	47929	Gain	Yes	<i>FGD4; DNMI1</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	168	12q12	12	43324243	43341561	17319	Gain	Yes	-	-
Case	358	12q12	12	44313582	44332028	18447	Gain		-	-
Case	312	12q13.11	12	45621796	45653693	31898	Loss	Yes	-	-
Case	190	12q13.13	12	51067730	51383458	315729	Gain	Yes	<i>KRT82; KRT75; KRT6B; KRT6C; KRT6A; KRT5; KRT71; KRT74; KRT72; KRT73; KRT2; KRT1; KRT77</i>	-
Case	314	12q13.3	12	55479708	55553901	74194	Loss	Yes	-	-
Case	186	12q14.1	12	58421479	58445012	23534	Loss	Yes	-	-
Case	237	12q14.1	12	60075246	60114390	39145	Gain		-	-
Case	110	12q21.1	12	71517646	71654154	136509	Loss	Yes	-	-
Case	327	12q21.1	12	72632531	72768849	136319	Loss		-	-
Case	39	12q21.31	12	79255527	79823534	568008	Gain	Yes	<i>OTOGL; PTPRQ; MYF6; MYF5; LIN7A</i>	hsa-miR-617
Case	44	12q21.31	12	79679461	81076827	1397367	Loss	Yes	<i>LIN7A; ACSS3; PPFIA2</i>	hsa-miR-617; hsa-miR-618; hsa-miR-4699-5p; hsa-miR-4699-3p
Case	114	12q21.32	12	86523522	86566812	43291	Gain	Yes	-	-
Case	124	12q21.32	12	86757016	86773979	16964	Loss	Yes	-	-
Case	277	12q23.1	12	96598149	96662256	64108	Loss	Yes	-	-
Case	117	12q23.1	12	98761881	98817201	55321	Loss		-	-
Case	102	12q24.11	12	107986824	108079800	92977	Gain	Yes	<i>USP30; ALKBH2; UNG; ACACB</i>	-
Case	56	12q24.32	12	126218723	126234808	16086	Loss	Yes	-	-
Case	274	12q24.32	12	127119918	127159179	39262	Loss	Yes	-	-
Case	211	12q24.33	12	131933656	132034386	100731	Gain	Yes	<i>CHFR; ZNF605</i>	-
Case	39	13q12.11	13	19694803	20009112	314310	Loss		<i>GJB6; CRYL1</i>	hsa-miR-4499
Case	177	13q12.12	13	23331104	23374073	42970	Gain		<i>MIPEP; CIQTNF9B; CIQTNF9B-AS1</i>	-
Case	391	13q12.12	13	24170898	24231779	60882	Gain		<i>ATP12A</i>	-
Case	300	13q12.3	13	30624099	30783812	159714	Gain		<i>HSPH1; B3GALTL</i>	-
Case	370	13q12.3	13	30624099	30783812	159714	Gain		<i>HSPH1; B3GALTL</i>	-
Case	148	13q12.3	13	30624099	30783812	159714	Gain		<i>HSPH1; B3GALTL</i>	-
Case	45	13q13.1, 13q13.2	13	32108632	34542657	2434026	Loss	Yes	<i>PDS5B; KL; STARD13; RFC3; NBEA</i>	-
Case	53	13q13.2	13	33376004	33476333	100330	Gain	Yes	<i>RFC3</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	347	13q13.2	13	34149941	34229976	80036	Loss	-		-
Case	318	13q14.3	13	52015880	52187439	171560	Gain		<i>HNRNPAIL2; SUGT1; LECT1</i>	-
Case	310	13q21.1	13	54041427	54376560	335134	Loss	Yes	-	-
Case	47	13q21.1	13	54088942	54110422	21481	Loss	Yes	-	-
Case	142	13q21.1	13	54924042	54999011	74970	Loss	Yes	-	-
Case	108	13q21.1	13	56500151	56563112	62962	Gain	Yes	-	-
Case	195	13q21.31	13	60537232	60579628	42397	Gain	Yes	-	-
Case	322	13q21.31	13	61992675	62045822	53148	Gain		-	-
Case	331	13q21.31	13	63160209	63187317	27109	Gain	Yes	-	-
Case	46	13q21.33, 13q21.32	13	66742848	67736281	993434	Gain	Yes	-	-
Case	121	13q21.33	13	67817205	67838362	21158	Gain	Yes	-	-
Case	257	13q21.33	13	67857627	67893136	35510	Loss	Yes	-	-
Case	261	13q21.33	13	69946172	69985840	39669	Gain	Yes	-	-
Case	233	13q21.33	13	70103780	70142908	39129	Loss	Yes	-	-
Case	316	13q21.33	13	71962732	71973205	10474	Loss	Yes	-	-
Case	240	13q22.2	13	74234986	74272359	37374	Loss	Yes	-	-
Case	52	13q22.3	13	76857347	76954200	96854	Gain	Yes	-	-
Case	47	13q22.3	13	77549464	77560694	11231	Gain	Yes	-	-
Case	221	13q31.1	13	79111809	79133076	21268	Loss	Yes	-	-
Case	224	13q31.1	13	79113330	79133076	19747	Loss	Yes	-	-
Case	103	13q31.1	13	81566239	81615070	48832	Gain	Yes	-	-
Case	121	13q31.1	13	82086779	82100192	13414	Gain		-	-
Case	154	13q31.1	13	82086779	82101299	14521	Gain		-	-
Case	179	13q31.1	13	82086779	82101299	14521	Gain		-	-
Case	124	13q31.1	13	83594161	83810310	216150	Gain	Yes	-	-
Case	102	13q31.1	13	84754135	84765621	11487	Gain		-	-
Case	114	13q31.1	13	85507219	85564135	56917	Gain	Yes	-	-
Case	265	13q31.1	13	86019752	86228251	208500	Loss	Yes	-	-
Case	177	13q31.3	13	89662891	89699054	36164	Loss	Yes	-	hsa-miR-622
Case	261	13q31.3	13	91706891	91802671	95781	Loss	Yes	-	-
Case	283	13q32.2	13	97244077	97255922	11846	Loss	Yes	-	-
Case	158	13q33.1	13	100941124	100983195	42072	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	158	13q33.1	13	101048595	101091527	42933	Loss	Yes	<i>ITGBL1</i>	-
Case	355	13q34	13	109543585	109558627	15043	Loss		-	-
Case	148	13q34	13	113003498	113073437	69940	Gain	Yes	<i>LAMP1; GRTP1</i>	-
Case	148	13q34	13	113130707	113314758	184052	Gain	Yes	<i>ADPRHL1; DCUNID2; TMC03; TFDPI</i>	-
Case	148	13q34	13	113835690	114063831	228142	Gain	Yes	<i>RASA3; CDC16</i>	hsa-miR-548ar-5p; hsa-miR-548ar-3p; hsa-miR-4502
Case	299	14q11.2	14	19759573	19786776	27204	Gain		<i>OR11H6; OR11H4</i>	-
Case	271	14q11.2	14	21567040	22030610	463571	Gain	Yes	-	-
Case	120	14q11.2	14	21575160	22034877	459718	Loss		-	-
Case	165	14q11.2	14	21575160	22034877	459718	Loss		-	-
Case	156	14q11.2	14	21773188	21874390	101203	Gain	Yes	-	-
Case	66	14q11.2	14	21835787	22013589	177803	Gain	Yes	-	-
Case	156	14q11.2	14	21935894	22030672	94779	Gain	Yes	-	-
Case	12	14q11.2	14	22228539	22334076	105538	Gain	Yes	<i>OXAIL; SLC7A7</i>	-
Case	168	14q12	14	26628908	26724585	95678	Loss		-	-
Case	376	14q12	14	26628908	26724585	95678	Loss		-	-
Case	173	14q12	14	26628908	26724585	95678	Loss		-	-
Case	324	14q12	14	26973659	27106877	133219	Loss		-	-
Case	42	14q21.1	14	38022752	38114064	91313	Loss		-	-
Case	47	14q21.1, 14q21.2, 14q21.3	14	40497844	43269768	2771925	Gain	Yes	<i>LRFN5</i>	-
Case	93	14q21.3	14	44165840	44192849	27010	Gain	Yes	-	-
Case	326	14q21.3	14	45261504	45300795	39292	Loss	Yes	-	-
Case	254	14q21.3	14	45451570	45545680	94111	Loss	Yes	-	-
Case	257	14q23.3	14	66122811	66151073	28263	Loss		-	-
Case	254	14q24.3	14	76394412	76448061	53650	Gain	Yes	<i>C14orf166B</i>	-
Case	224	14q31.1	14	78793393	78814026	20634	Loss	Yes	-	-
Case	13	14q31.3	14	84302948	84356082	53135	Gain	Yes	-	-
Case	154	14q31.3	14	84613560	84636868	23309	Gain	Yes	-	-
Case	119	14q31.3	14	84919906	84968497	48592	Loss	Yes	-	-
Case	76	14q31.3	14	85959121	86048278	89158	Loss		-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	97	14q31.3	14	86197943	86220810	22868	Gain	Yes	-	-
Case	294	14q32.13	14	94392551	94417096	24546	Gain	Yes	-	-
Case	153	14q32.2	14	97319155	97340577	21423	Loss	Yes	-	-
Case	163	14q32.33	14	104854470	105035738	181269	Gain	Yes	<i>PACS2; TEX22; MTA1; CRIP2; CRIP1; C14orf80</i>	-
Case	156	14q32.33	14	105265522	106160517	894996	Loss	-	-	hsa-miR-4539; hsa-miR-4507; hsa-miR-4538; hsa-miR-4537
Case	280	14q32.33	14	105268160	105920721	652562	Loss	-	-	hsa-miR-4539; hsa-miR-4507; hsa-miR-4538; hsa-miR-4537
Case	153	14q32.33	14	105413362	105601732	188371	Loss	-	-	-
Case	274	14q32.33	14	105413362	105598011	184650	Loss	-	-	-
Case	325	14q32.33	14	106224112	106276784	52673	Gain	-	-	-
Case	247	14q32.33	14	106325131	106356482	31352	Gain	-	-	hsa-miR-5195-5p; hsa-miR-5195-3p
Case	48	15q11.2, 15q13.1, 15q12	15	20224763	26723209	6498447	Gain	Yes	<i>NPAP1; SNURF; SNRPN; UBE3A; ATP10A; GABRB3; GABRA5; GABRG3; OCA2; HERC2; GOLGA6L1; TUBGCP5; CYFIP1; NIPA2; NIPA1; LOC440243; MKRN3; MAGEL2; NDN</i>	hsa-miR-4715-5p; hsa-miR-4715-3p; hsa-miR-4509; hsa-miR-4509; hsa-miR-4508
Case	49	15q11.2, 15q13.1, 15q12	15	21192955	26873178	5680224	Gain	Yes	<i>MKRN3; MAGEL2; NDN; NPAP1; SNURF; SNRPN; UBE3A; ATP10A; GABRB3; GABRA5; GABRG3; OCA2; HERC2</i>	hsa-miR-4508; hsa-miR-4715-5p; hsa-miR-4715-3p; hsa-miR-4509
Case	50	15q11.2, 15q13.1, 15q12	15	21192955	26208003	5015049	Gain	Yes	<i>NPAP1; SNURF; SNRPN; UBE3A; ATP10A; GABRB3; GABRA5; GABRG3; OCA2; HERC2; MKRN3; MAGEL2; NDN</i>	hsa-miR-4715-5p; hsa-miR-4715-3p; hsa-miR-4508
Case	311	15q11.2	15	22161116	22276385	115270	Gain	-	-	-
Case	334	15q11.2	15	22842424	22882268	39845	Gain	-	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	220	15q11.2	15	22842424	22882268	39845	Gain	-		-
Case	230	15q11.2	15	22961502	23004107	42606	Gain	-		-
Case	237	15q11.2	15	22961502	23004107	42606	Gain	-		-
Case	262	15q11.2	15	22961502	23004107	42606	Gain	-		-
Case	275	15q11.2	15	22961502	23004107	42606	Gain	-		-
Case	103	15q11.2	15	22968217	23003805	35589	Gain	-		-
Case	360	15q11.2	15	22968217	23003805	35589	Gain	-		-
Case	58	15q11.2	15	22968217	23003805	35589	Gain	-		-
Case	334	15q11.2	15	22968217	23003805	35589	Gain	-		-
Case	51	15q13.1, 15q12	15	23766255	26203954	2437700	Gain	Yes	<i>GABRB3; GABRA5; GABRG3; OCA2; HERC2</i>	-
Case	235	15q12	15	24090400	24101953	11554	Loss	Yes	-	-
Case	344	15q12	15	25504394	25524868	20475	Gain	Yes	-	-
Case	36	15q13.2	15	28153539	28717792	564254	Gain	Yes	<i>CHRFAM7A; ARHGAP11B</i>	-
Case	52	15q13.2, 15q13.3	15	28608929	30299512	1690584	Loss	Yes	<i>ARHGAP11B; FAN1; MTMR10; TRPM1; LOC283710; KLF13; OTUD7A; CHRNA7</i>	hsa-miR-211-5p; hsa-miR-211-3p
Case	2	15q13.3	15	29097455	29125653	28199	Gain	Yes	<i>TRPM1</i>	-
Case	282	15q13.3	15	30245953	30299512	53560	Loss		<i>CHRNA7</i>	-
Case	390	15q13.3	15	30291556	30320383	28828	Loss		-	-
Case	251	15q14	15	31939673	31970438	30766	Gain	Yes	<i>RYR3; AVEN</i>	-
Case	29	15q14	15	33113782	33133647	19866	Loss	Yes	-	-
Case	311	15q14	15	36830660	36841548	10889	Loss	Yes	-	-
Case	63	15q21.1	15	43781873	43936568	154696	Loss		-	-
Case	216	15q21.2	15	48882605	48968126	85522	Gain	Yes	-	-
Case	379	15q21.2	15	50782941	50828102	45162	Gain		-	-
Case	128	15q21.3	15	52288401	52309659	21259	Loss	Yes	-	-
Case	21	15q22.2	15	57862260	57891107	28848	Loss	Yes	-	-
Case	161	15q23	15	67295221	67307974	12754	Gain	Yes	-	-
Case	24	15q24.2	15	73205376	73233436	28061	Gain	Yes	-	-
Case	212	15q24.3	15	74678296	74698888	20593	Gain	Yes	-	-
Case	82	15q25.2	15	81042381	81265143	222763	Gain	Yes	<i>CPEB1; AP3B2; FSD2</i>	-
Case	103	15q25.3	15	84499004	84530725	31722	Loss	Yes	<i>AGBL1</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	263	15q26.1	15	91753155	91804301	51147	Loss	Yes	-	-
Case	254	15q26.3	15	96317626	96423019	105394	Loss	Yes	-	-
Case	9	15q26.3	15	98203369	98319816	116448	Loss		-	-
Case	208	15q26.3	15	99848867	100128781	279915	Gain		<i>TM2D3; TARSL2</i>	-
Case	90	15q26.3	15	99975987	100071796	95810	Gain	Yes	<i>TM2D3; TARSL2</i>	-
Case	265	15q26.3	15	99975987	100061550	85564	Gain	Yes	<i>TM2D3; TARSL2</i>	-
Case	237	16p13.3	16	725280	838329	113050	Gain		<i>NARFL; MSLN; RPUSD1; CHTF18; GNGI3; PRR25</i>	hsa-miR-662
Case	331	16p13.3	16	3634773	3659345	24573	Loss		<i>DNASE1; TRAP1</i>	-
Case	206	16p13.3	16	4465283	4551760	86478	Loss	Yes	<i>HMOX2; CDIP1; C16orf96</i>	-
Case	232	16p13.3	16	4589721	4636655	46935	Loss	Yes	<i>C16orf96; UBALD1; MGRN1</i>	-
Case	54	16p13.3	16	6171253	6203634	32382	Loss	Yes	-	-
Case	332	16p13.2	16	6565423	6610859	45437	Loss		-	-
Case	85	16p13.2	16	6754460	6805109	50650	Loss	Yes	-	-
Case	87	16p13.2	16	6973749	7078712	104964	Loss	Yes	<i>RBFOX1</i>	-
Case	62	16p13.2	16	6992360	7136112	143753	Loss	Yes	<i>RBFOX1</i>	-
Case	202	16p13.2	16	7047357	7070975	23619	Loss		-	-
Case	215	16p13.2	16	8679882	8815472	135591	Gain	Yes	<i>ABAT; TMEM186; PMM2</i>	-
Case	32	16p13.2	16	9982679	9993631	10953	Loss	Yes	-	-
Case	347	16p13.13	16	10310012	10331132	21121	Loss		-	-
Case	296	16p13.13	16	11515745	11545689	29945	Gain	Yes	-	-
Case	176	16p13.12	16	12554682	12623894	69213	Loss	Yes	<i>SNX29</i>	-
Case	101	16p13.12	16	12629008	12643485	14478	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	53	16p13.11	16	14805302	16304013	1498712	Gain		<i>NOMO1; NPIPA1; PDXDC1; NTANI; RRN3; NPIPA5; MPV17L; C16orf45; KIAA0430; NDE1; MYH11; FOPNL; ABCC1; ABCC6; NOMO3</i>	hsa-miR-3179; hsa-miR-3670; hsa-miR-3180-5p; hsa-miR-3180-3p; hsa-miR-6511a-5p; hsa-miR-6511a-3p; hsa-miR-6770-5p; hsa-miR-6770-3p; hsa-miR-1972; hsa-miR-3180; hsa-miR-6506-5p; hsa-miR-6506-3p; hsa-miR-484
Case	54	16p13.11	16	15032942	16421139	1388198	Gain		<i>PDXDC1; NTANI; RRN3; NPIPA5; MPV17L; C16orf45; KIAA0430; NDE1; MYH11; FOPNL; ABCC1; ABCC6; NOMO3</i>	hsa-miR-3180; hsa-miR-6506-5p; hsa-miR-6506-3p; hsa-miR-484; hsa-miR-3179; hsa-miR-3670; hsa-miR-3180-5p; hsa-miR-3180-3p; hsa-miR-6511a-5p; hsa-miR-6511a-3p
Case	174	16p13.11	16	15888009	15931537	43529	Gain	Yes	<i>FOPNL</i>	-
Case	203	16p12.3	16	19016148	19030244	14097	Loss	Yes	-	-
Case	219	16p12.3	16	19657507	19711347	53841	Gain	Yes	<i>IQCK</i>	-
Case	109	16p12.3	16	20453353	20464612	11260	Loss	Yes	<i>ACSM2B</i>	-
Case	114	16p12.1	16	21958109	22003654	45546	Gain	Yes	<i>C16orf52</i>	-
Case	253	16p12.1	16	23795684	23810657	14974	Loss	Yes	-	-
Case	18	16p11.2	16	28731428	28779467	48040	Gain	Yes	<i>ATXN2L; TUFM</i>	hsa-miR-4721
Case	18	16p11.2	16	28864929	28933479	68551	Gain	Yes	<i>NFATC2IP; SPNS1; LAT</i>	hsa-miR-4517

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	55	16p11.2	16	29474810	30099408	624599	Gain	Yes	<i>SPN; QPRT; C16orf54; ZG16; KIF22; MAZ; PRRT2; PAGR1; MVP; CDIPT; SEZ6L2; ASPHD1; KCTD13; TMEM219; TAOK2; HIRIP3; INO80E; DOC2A; C16orf92; FAM57B; ALDOA; PPP4C; TBX6; YPEL3; GDPD3; MAPK3</i>	hsa-miR-3680-5p; hsa-miR-3680-3p
Case	56	16p11.2	16	29474810	30134444	659635	Gain	Yes	<i>SPN; QPRT; C16orf54; ZG16; KIF22; MAZ; PRRT2; PAGR1; MVP; CDIPT; SEZ6L2; ASPHD1; KCTD13; TMEM219; TAOK2; HIRIP3; INO80E; DOC2A; C16orf92; FAM57B; ALDOA; PPP4C; TBX6; YPEL3; GDPD3; MAPK3; CORO1A; BOLA2; BOLA2B; SLX1A; SLX1B; SULT1A3; SULT1A4</i>	hsa-miR-3680-5p; hsa-miR-3680-3p
Case	57	16p11.2	16	29474810	30099408	624599	Gain	Yes	<i>SPN; QPRT; C16orf54; ZG16; KIF22; MAZ; PRRT2; PAGR1; MVP; CDIPT; SEZ6L2; ASPHD1; KCTD13; TMEM219; TAOK2; HIRIP3; INO80E; DOC2A; C16orf92; FAM57B; ALDOA; PPP4C; TBX6; YPEL3; GDPD3; MAPK3</i>	hsa-miR-3680-5p; hsa-miR-3680-3p
Case	58	16p11.2	16	29474810	30134444	659635	Gain	Yes	<i>SPN; QPRT; C16orf54; ZG16; KIF22; MAZ; PRRT2; PAGR1; MVP; CDIPT; SEZ6L2; ASPHD1; KCTD13; TMEM219; TAOK2; HIRIP3; INO80E; DOC2A; C16orf92; FAM57B; ALDOA; PPP4C; TBX6; YPEL3; GDPD3; MAPK3; CORO1A; BOLA2; BOLA2B; SLX1A; SLX1B; SULT1A3; SULT1A4</i>	hsa-miR-3680-5p; hsa-miR-3680-3p
Case	72	16p11.2	16	29992838	30306681	313844	Loss	Yes	<i>PPP4C; TBX6; YPEL3; GDPD3; MAPK3; CORO1A; BOLA2; BOLA2B; SLX1A; SLX1B; SULT1A3; SULT1A4; CD2BP2; TBC1D10B; MYLPF; SEPT1</i>	-
Case	59	16p11.1, 16p11.2	16	34324072	35140727	816656	Gain	-	-	-
Case	284	16q21	16	61434565	61501229	66665	Loss	Yes	-	-
Case	113	16q21	16	61434565	61505546	70982	Loss	Yes	-	-
Case	139	16q21	16	61434565	61501229	66665	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	88	16q21	16	62111195	62214225	103031	Loss	Yes	-	-
Case	264	16q21	16	65156475	65168850	12376	Gain	Yes	<i>CKLF; CMTM1; CKLF-CMTM1</i>	-
Case	66	16q22.1	16	68926410	68956234	29825	Gain	Yes	<i>DDX19A</i>	-
Case	2	16q22.2	16	69408394	69477595	69202	Gain		<i>HYDIN</i>	-
Case	2	16q22.2	16	69541283	69760298	219016	Gain	Yes	<i>HYDIN</i>	-
Case	175	16q22.3	16	69848448	69917101	68654	Loss	Yes	<i>FTSJD1</i>	-
Case	267	16q22.3	16	70966457	71319235	352779	Loss	Yes	-	-
Case	197	16q23.1	16	73426308	73558856	132549	Loss	Yes	<i>WDR59</i>	-
Case	208	16q23.1	16	74513475	74557922	44448	Loss	Yes	-	-
Case	219	16q23.1	16	76128991	76547275	418285	Gain	Yes	<i>NUDT7; VATIL</i>	-
Case	49	16q23.1	16	77818019	77832850	14832	Gain	Yes	-	-
Case	340	16q23.2	16	80150435	80164070	13636	Loss		-	-
Case	259	16q24.1	16	82986056	83102109	116054	Gain	Yes	<i>ATP2C2; TLDC1</i>	-
Case	184	16q24.1	16	83466461	83512239	45779	Loss	Yes	<i>CRISPLD2</i>	-
Case	107	16q24.1	16	83737671	83754097	16427	Loss	Yes	-	-
Case	333	16q24.2	16	85838526	85862337	23812	Loss	Yes	-	-
Case	209	16q24.2	16	85843690	85900876	57187	Loss	Yes	<i>C16orf95</i>	-
Case	111	16q24.3	16	88279461	88465741	186281	Loss	Yes	<i>CDK10; SPATA2L; VPS9D1; ZNF276; FANCA; SPIRE2</i>	-
Case	149	17p13.3	17	737820	758612	20793	Loss	Yes	-	-
Case	7	17p13.3	17	2024670	2044218	19549	Loss	Yes	<i>SMG6</i>	-
Case	186	17p13.3	17	2344518	2713720	369203	Gain	Yes	<i>METTL16; PAFAH1B1; CLUH; RAPIGAP2</i>	hsa-miR-6776-5p; hsa-miR-6776-3p; hsa-miR-1253
Case	213	17p13.2	17	6047210	6073536	26327	Loss		-	-
Case	107	17p13.1, 17p13.2	17	6790374	6822833	32460	Loss	Yes	-	-
Case	160	17p13.1	17	8151077	8200707	49631	Gain	Yes	<i>ARHGEF15; ODF4</i>	-
Case	294	17p12	17	13120820	13175561	54742	Gain		-	-
Case	103	17p11.2	17	18714996	18863470	148475	Gain	Yes	<i>PRPSAP2; SLC5A10; FAM83G</i>	-
Case	122	17p11.2	17	18729063	18858640	129578	Gain	Yes	<i>PRPSAP2; SLC5A10; FAM83G</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	122	17p11.2	17	19070824	19201813	130990	Gain		<i>EPN2; B9D1</i>	hsa-miR-1180-3p; hsa-miR-1180-5p
Case	142	17q12	17	34829160	34867540	38381	Gain		<i>MED1</i>	-
Case	113	17q23.1	17	55345451	55435265	89815	Gain	Yes	<i>RPS6KB1; RNFT1</i>	-
Case	53	17q24.1	17	60349633	60428064	78432	Gain	Yes	-	-
Case	248	17q24.2	17	61841258	61912613	71356	Loss		-	-
Case	61	17q24.2	17	61941341	62219289	277949	Loss	Yes	<i>PRKCA</i>	hsa-miR-634
										hsa-miR-657; hsa-miR-3065-5p; hsa-miR-3065-3p; hsa-miR-338-5p; hsa-miR-338-3p; hsa-miR-1250-5p; hsa-miR-1250-3p
Case	150	17q25.3	17	76591190	76746508	155319	Gain	Yes	<i>BALAP2; AATK</i>	-
Case	58	17q25.3	17	77141968	77243682	101715	Gain	Yes	<i>NPLOC4; TSPAN10; PDE6G; OXLD1</i>	-
Case	233	17q25.3	17	78435082	78454495	19414	Gain	Yes	<i>TBCD</i>	-
Case	140	17q25.3	17	78495700	78513885	18186	Loss	Yes	<i>B3GNTL1</i>	-
Case	56	18p11.32	18	1543	90949	89407	Loss	Yes	-	-
Case	182	18p11.32	18	38133	68539	30407	Loss	Yes	-	-
Case	135	18p11.31	18	5458670	5475196	16527	Gain	Yes	<i>EPB41L3</i>	-
Case	295	18p11.31	18	6477465	6510592	33128	Loss	Yes	<i>LOC100130480</i>	-
Case	174	18p11.31	18	6479608	6510592	30985	Loss	Yes	<i>LOC100130480</i>	-
Case	119	18p11.23	18	7899131	7954894	55764	Loss	Yes	<i>PTPRM</i>	-
Case	156	18p11.21	18	14958787	15318076	359290	Gain	Yes	-	-
Case	129	18q11.2	18	22897038	22923293	26256	Gain	Yes	-	-
Case	143	18q11.2	18	22897554	22923293	25740	Gain	Yes	-	-
Case	246	18q12.1	18	23693824	23706904	13081	Gain	Yes	-	-
Case	255	18q12.1	18	25362305	25391917	29613	Gain	Yes	-	-
Case	72	18q12.1	18	26812963	26855042	42080	Gain	Yes	<i>DSC3</i>	-
Case	258	18q12.2	18	35194243	35321214	126972	Gain	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	126	18q12.2, 18q12.3	18	35467011	35514435	47425	Loss	Yes	-	hsa-miR-5583-5p; hsa-miR-5583-3p
Case	132	18q12.3	18	37880681	37908226	27546	Loss	Yes	<i>PIK3C3</i>	-
Case	20	18q12.3	18	38094336	38152496	58161	Gain	Yes	-	-
Case	107	18q21.1	18	42767511	42823656	56146	Gain	Yes	<i>TCEB3CL2; TCEB3CL; TCEB3C; TCEB3B</i>	-
Case	194	18q21.2	18	47391508	47410166	18659	Gain	Yes	-	-
Case	280	18q21.2	18	49439197	49450886	11690	Loss		-	-
Case	111	18q21.2	18	49887046	49912013	24968	Gain	Yes	-	-
Case	318	18q21.33	18	57449818	57465077	15260	Gain	Yes	-	-
Case	25	18q21.33	18	57449818	57465077	15260	Gain	Yes	-	-
Case	285	18q22.1	18	61276836	61330292	53457	Loss	Yes	-	-
Case	160	18q22.1	18	63759585	63934609	175025	Loss		-	-
Case	151	18q22.1	18	64076387	64091877	15491	Loss	Yes	-	-
Case	89	18q22.2	18	65614643	65625466	10824	Loss	Yes	-	-
Case	90	18q22.2	18	65639534	65649742	10209	Loss	Yes	-	-
Case	283	18q22.2	18	66580807	66629311	48505	Loss	Yes	-	-
Case	253	18q22.3	18	66917040	66977396	60357	Gain	Yes	-	-
Case	238	18q22.3	18	68044449	68058704	14256	Loss	Yes	-	-
Case	182	18q22.3	18	69281483	69311825	30343	Loss	Yes	-	-
Case	341	18q22.3	18	69444668	69598084	153417	Gain	Yes	-	-
Case	316	18q23	18	72540040	72610755	70716	Gain	Yes	-	-
Case	115	18q23	18	73993496	74028815	35320	Gain	Yes	-	-
Case	155	18q23	18	75615004	75645643	30640	Gain	Yes	-	-
Case	155	18q23	18	75831795	76024184	192390	Gain	Yes	<i>TXNL4A; RBFA; ADNP2; PARD6G</i>	-
									<i>HMHA1; POLR2E; GPX4; SBNO2; STK11; C19orf26; ATP5D; MIDN; CIRBP; C19orf24; EFNA2; MUM1; NDUFS7;</i>	
Case	72	19p13.3	19	1028701	1427815	399115	Loss	Yes	<i>GAMT; DAZAP1; RPS15; APC2; C19orf25</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	195	19p13.3	19	2015619	2195903	180285	Loss	Yes	<i>MOB3A; IZUMO4; AP3D1; DOTIL;</i> <i>PLEKHJ1; SF3A2</i>	hsa-miR-1227-3p; hsa-miR-1227-5p; hsa-miR-6789-5p; hsa-miR-6789-3p
Case	145	19p13.2	19	6950420	7022394	71975	Gain	Yes	<i>MBD3L5; MBD3L4; MBD3L2; MBD3L3</i>	-
Case	116	19p13.12	19	13984115	14008593	24479	Gain	Yes	<i>RLN3; IL27RA</i>	-
Case	254	19p13.12	19	14707300	14717363	10064	Loss	Yes	<i>EMR2</i>	-
Case	271	19p13.11	19	17754374	17822563	68190	Gain	Yes	<i>FCHO1; B3GNT3; INSL3; JAK3</i>	-
Case	271	19p13.11	19	17909871	17965155	55285	Gain	Yes	<i>CCDC124; KCNN1</i>	-
Case	20	19p12	19	22926249	23090115	163867	Loss	Yes	<i>ZNF728</i>	-
Case	61	19q12	19	32648879	35564952	2916074	Loss	Yes	<i>UQCERS1; VSTM2B; POP4; PLEKHF1;</i> <i>C19orf12; CCNE1; URI1</i>	-
Case	187	19q13.2	19	46030675	46042833	12159	Gain	Yes	<i>CYP2A6</i>	-
Case	215	19q13.2	19	46749186	46864282	115097	Gain	Yes	<i>CEACAM21; CEACAM4</i>	-
Case	50	19q13.31	19	48248681	48288811	40131	Gain	Yes	<i>PSG2</i>	-
Case	233	19q13.32	19	50317957	50331393	13437	Gain	Yes	-	-
Case	364	19q13.33	19	56331792	56375631	43840	Loss		<i>SIGLEC7</i>	-
Case	249	19q13.41	19	57976532	57991786	15255	Gain	Yes	-	-
Case	366	19q13.42	19	59414087	59539399	125313	Gain		<i>LILRB3; LILRA6; LILRB5; LILRB2; LILRA3;</i> <i>LILRA5; LILRA4</i>	hsa-miR-4752
Case	259	19q13.42	19	59423798	59539399	115602	Gain		<i>LILRA6; LILRB5; LILRB2; LILRA3; LILRA5;</i> <i>LILRA4</i>	hsa-miR-4752
Case	166	19q13.42	19	59721259	59844600	123342	Loss	Yes	<i>LILRA2; LILRA1; LILRB1</i>	-
Case	76	19q13.42	19	61116344	61190605	74262	Gain		<i>NLRP13; NLRP8</i>	-
Case	244	19q13.43	19	63209481	63252562	43082	Loss	Yes	<i>ZSCAN1</i>	-
Case	203	20p13	20	9548	57365	47818	Gain	Yes	<i>DEFB125</i>	-
Case	125	20p13	20	3966460	4025219	58760	Loss	Yes	-	-
Case	182	20p12.3	20	7211956	7230051	18096	Loss	Yes	-	-
Case	151	20p12.1	20	14183816	14197808	13993	Gain	Yes	-	-
Case	62	20p12.1	20	14305685	15414625	1108941	Loss	Yes	<i>MACROD2</i>	-
Case	70	20p12.1	20	14425907	14488691	62785	Loss	Yes	-	-
Case	269	20p12.1	20	14830862	14845614	14753	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	300	20p12.1	20	14855597	15145890	290294	Loss	-		-
Case	16	20p12.1	20	14869065	14893839	24775	Loss	Yes		-
Case	119	20p11.21	20	25613467	25686625	73159	Gain	Yes	<i>ZNF337</i>	-
Case	18	20q11.1	20	28119553	28141554	22002	Loss	Yes		-
Case	6	20q11.21	20	31221629	31296441	74813	Loss		<i>BPIFA2; BPIFA3; BPIFA1</i>	-
Case	142	20q12	20	39196466	39273206	76741	Gain	Yes	<i>PLCG1; ZHX3</i>	hsa-miR-6871-5p; hsa-miR-6871-3p
Case	91	20q12	20	40639325	40725926	86602	Loss	Yes		-
Case	45	20q12	20	40683821	40702831	19011	Loss			-
Case	92	20q12	20	40778749	40966014	187266	Gain	Yes	<i>PTPRT</i>	-
Case	49	20q13.13	20	48145470	48430784	285315	Loss	Yes	<i>TMEM189-UBE2V1; UBE2V1; TMEM189; CEBPB</i>	-
Case	223	20q13.2	20	49948917	49967658	18742	Loss			-
Case	244	20q13.2	20	53925050	53938003	12954	Loss	Yes		-
Case	114	20q13.31	20	54839918	54863231	23314	Loss			-
Case	144	21q11.2	21	14829091	14855153	26063	Gain		<i>SAMSNI</i>	-
Case	222	21q21.1	21	16685095	16703974	18880	Gain	Yes		-
Case	184	21q21.1	21	18463079	18475103	12025	Loss	Yes		-
Case	36	21q21.1	21	18463079	18475103	12025	Loss	Yes		-
Case	144	21q21.1	21	20473109	20483508	10400	Loss	Yes		-
Case	76	21q21.1	21	21731550	21745297	13748	Loss	Yes		-
Case	44	21q21.1	21	22501126	22892332	391207	Loss	Yes		-
Case	340	21q21.2	21	22943006	22997705	54700	Loss	Yes		-
Case	20	21q21.2	21	24618999	24705724	86726	Loss	Yes		-
Case	129	21q21.3	21	29373455	29406022	32568	Loss	Yes	<i>MAP3K7CL</i>	-
Case	166	21q21.3	21	30082515	30094325	11811	Loss	Yes		-
Case	223	21q22.11, 21q22.12	21	34644865	34827864	183000	Gain		<i>KCNE2; SMIM11; KCNE1; RCAN1</i>	-
Case	274	21q22.11	21	34644865	34827864	183000	Gain		<i>KCNE1; RCAN1; KCNE2; SMIM11</i>	-
Case	327	21q22.3	21	43477781	43488054	10274	Loss	Yes		-
Case	133	21q22.3	21	46327739	46495061	167323	Gain	Yes	<i>COL6A2; FTCD; SPATC1L; LSS; MCM3AP</i>	-
Case	181	21q22.3	21	46843667	46860664	16998	Loss	Yes	<i>SI00B</i>	-
Case	2	22q11.1	22	14439734	14482524	42791	Gain			-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Case	155	22q11.1	22	14439734	14482524	42791	Gain	-		-
Case	312	22q11.1	22	15252849	15333727	80879	Gain	-		-
Case	144	22q11.1	22	15268900	15380277	111378	Gain	-		-
Case	231	22q11.1	22	15270159	15467705	197547	Gain	-	<i>CCT8L2</i>	-
Case	208	22q11.21	22	18411601	18433554	21954	Loss	Yes	<i>TANGO2</i>	-
Case	273	22q11.21	22	18411601	18437143	25543	Loss	Yes	<i>TANGO2</i>	-
Case	213	22q11.21	22	18411964	18437143	25180	Loss	Yes	<i>TANGO2</i>	-
Case	94	22q12.1	22	25285854	25344467	58614	Gain	Yes	<i>CRYBB1</i>	-
Case	63	22q12.1	22	25367395	25440827	73433	Loss	Yes	-	-
Case	63	22q12.1	22	25696811	27001242	1304432	Loss	Yes	<i>MN1; PITPNB; TTC28</i>	hsa-miR-3199
Case	377	22q12.2	22	28092170	28142673	50504	Loss	-	<i>APIB1</i>	-
Case	270	22q13.33	22	49298465	49337390	38926	Gain	Yes	<i>NCAPH2; SCO2; TYMP; ODF3B; KLHDC7B; SYCE3</i>	-
Comparison	OPGP316	1p36.32	1	2777567	3114015	336449	Gain	-	<i>ACTRT2; PRDM16</i>	hsa-miR-4251
Comparison	OPGP227	1p36.32	1	3132655	3225901	93247	Gain	Yes	<i>PRDM16</i>	-
Comparison	OPGP146	1p36.32	1	3162562	3230995	68434	Gain	Yes	-	-
Comparison	OPGP316	1p36.32	1	3273162	3502376	229215	Gain	Yes	<i>PRDM16; ARHGEF16; MEGF6</i>	hsa-miR-551a
Comparison	OPGP301	1p36.22	1	10918066	10975411	57346	Loss	Yes	<i>C1orf127</i>	-
Comparison	OPGP195	1p36.13	1	19592679	19608982	16304	Loss	Yes	-	-
Comparison	OPGP125	1p36.11	1	25180271	25595837	415567	Gain	-	<i>SYF2; C1orf63; RHD; TMEM50A; RHCE</i>	hsa-miR-4425
Comparison	OPGP91	1p36.11	1	26685662	26722882	37221	Loss	Yes	-	-
Comparison	OPGP235	1p35.1	1	33137332	33344564	207233	Gain	Yes	<i>TMEM54; RNF19B; AK2; ADC</i>	-
Comparison	OPGP304	1p34.3	1	34864045	34877078	13034	Loss	-	-	-
Comparison	OPGP351	1p34.3	1	34864045	34877078	13034	Loss	-	-	-
Comparison	OPGP116	1p34.2	1	40738766	40753817	15052	Loss	Yes	<i>EXO5</i>	-
Comparison	OPGP314	1p34.1	1	46158906	46278997	120092	Gain	Yes	<i>MAST2</i>	-
Comparison	OPGP95	1p34.1	1	46243892	46306844	62953	Gain	Yes	<i>MAST2; PIK3R3</i>	-
Comparison	OPGP225	1p33	1	48438616	48561408	122793	Gain	-	<i>SLC5A9; SPATA6</i>	-
Comparison	OPGP8	1p33	1	50062688	50089082	26395	Loss	Yes	-	-
Comparison	OPGP222	1p32.3	1	55268332	55280544	12213	Loss	Yes	<i>PCSK9</i>	-
Comparison	OPGP336	1p32.2	1	58121593	58147861	26269	Gain	Yes	-	-
Comparison	OPGP285	1p31.1	1	71372770	71425908	53139	Loss	Yes	-	-
Comparison	OPGP243	1p31.1	1	72391356	72426021	34666	Loss	-	-	-

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Comparison	OPGP287	1p31.1	1	72391356	72426021	34666	Loss	-		-
Comparison	OPGP302	1p31.1	1	72391356	72430802	39447	Loss	-		-
Comparison	OPGP86	1p31.1	1	76002427	76017962	15536	Loss	Yes		-
Comparison	OPGP132	1p31.1	1	76844658	76875040	30383	Gain	Yes	<i>ST6GALNAC3</i>	-
Comparison	OPGP355	1p22.3	1	86476458	86681286	204829	Gain	Yes	<i>ODF2L; CLCA2</i>	hsa-miR-7856-5p
Comparison	OPGP317	1p22.3	1	86686760	86766066	79307	Gain	Yes	<i>CLCA2; CLCA1</i>	-
Comparison	OPGP317	1p22.3	1	87079658	87247940	168283	Gain	Yes	<i>SEP15; HS2ST1</i>	-
Comparison	OPGP139	1p22.2	1	91962660	91991656	28997	Gain	Yes	<i>TGFBR3</i>	-
Comparison	OPGP201	1p22.1	1	92787354	92821078	33725	Loss	Yes	<i>EVI5</i>	-
Comparison	OPGP66	1p21.1, 1p21.2	1	101816320	102613362	797043	Gain	Yes	<i>OLFM3</i>	-
Comparison	OPGP84	1p21.1	1	104746588	104830044	83457	Loss	-		-
Comparison	OPGP28	1p21.1	1	104901435	104966009	64575	Loss	Yes	-	-
Comparison	OPGP278	1p13.3	1	107863323	107875050	11728	Loss	Yes	-	-
Comparison	OPGP48	1p13.2	1	111645981	111686452	40472	Loss	Yes	<i>CHIA</i>	-
Comparison	OPGP11	1p13.2	1	113105462	113378590	273129	Gain	Yes	<i>SLC16A1</i>	-
Comparison	OPGP326	1p13.2	1	113615510	113930997	315488	Gain	Yes	<i>MAGI3</i>	-
Comparison	OPGP311	1q21.1	1	145433143	145445807	12665	Gain	Yes	-	-
Comparison	OPGP287	1q21.1	1	147509865	147521544	11680	Gain	-		-
Comparison	OPGP360	1q21.1	1	147509865	147521544	11680	Gain	-		-
Comparison	OPGP99	1q21.3	1	152087315	152103245	15931	Loss	Yes	-	-
Comparison	OPGP18	1q23.1	1	156720980	156780407	59428	Loss	Yes	-	-
Comparison	OPGP70	1q23.2	1	158189735	158199885	10151	Loss	-	<i>SLAMF9</i>	-
Comparison	OPGP296	1q23.2	1	158189735	158199885	10151	Loss	-	<i>SLAMF9</i>	-
Comparison	OPGP63	1q23.3	1	161823329	162062754	239426	Loss	-		-
Comparison	OPGP16	1q24.1	1	165460615	165471136	10522	Gain	Yes	-	-
Comparison	OPGP368	1q24.2	1	168007475	168018527	11053	Loss	Yes	-	-
Comparison	OPGP259	1q25.2	1	177590361	177652141	61781	Gain	-	<i>AXDND1</i>	-
Comparison	OPGP103	1q31.1	1	186906390	186964586	58197	Loss	Yes	-	-
Comparison	OPGP189	1q31.1	1	187884325	187928475	44151	Loss	Yes	-	-
Comparison	OPGP66	1q31.2	1	189259675	189313065	53391	Loss	Yes	-	-
Comparison	OPGP285	1q31.2	1	189954806	190006828	52023	Loss	Yes	-	-
Comparison	OPGP288	1q31.2	1	191140521	191161167	20647	Loss	-		-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP209	1q31.2	1	191141895	191158815	16921	Loss	-	-	-
Comparison	OPGP91	1q31.3	1	194006743	194258287	251545	Loss	Yes	-	-
Comparison	OPGP311	1q31.3	1	194981445	194997657	16213	Loss	-	<i>CFH</i>	-
Comparison	OPGP87	1q32.1	1	203705537	203723303	17767	Gain	-	-	-
Comparison	OPGP337	1q32.2	1	206849922	207054121	204200	Gain	Yes	-	-
Comparison	OPGP214	1q32.3	1	210617154	210640252	23099	Loss	Yes	<i>TMEM206</i>	-
Comparison	OPGP289	1q41	1	212711886	212760921	49036	Loss	Yes	-	-
Comparison	OPGP140	1q41	1	213519909	213596382	76474	Loss	Yes	-	-
Comparison	OPGP197	1q41	1	216790158	217087235	297078	Gain	Yes	-	-
Comparison	OPGP31	1q41	1	217909214	217922263	13050	Loss	-	-	-
Comparison	OPGP78	1q41	1	221699976	221773616	73641	Gain	Yes	-	-
Comparison	OPGP34	1q43	1	237168933	237189486	20554	Loss	Yes	-	-
Comparison	OPGP40	1q43	1	241125282	241147170	21889	Gain	-	-	-
Comparison	OPGP254	1q44	1	242020777	242070772	49996	Gain	Yes	-	-
Comparison	OPGP364	1q44	1	243756388	244239828	483441	Gain	Yes	<i>KIF26B; SMYD3</i>	-
Comparison	OPGP323	1q44	1	246218668	246276668	58001	Loss	Yes	<i>OR2L5; OR2L2</i>	-
Comparison	OPGP243	1q44	1	246236516	246305216	68701	Gain	-	<i>OR2L5; OR2L2; OR2L3</i>	-
Comparison	OPGP68	2p25.3	2	3836936	3849326	12391	Loss	Yes	-	-
Comparison	OPGP264	2p25.1	2	12003792	12026252	22461	Loss	Yes	-	-
Comparison	OPGP161	2p25.1	2	12602820	12613687	10868	Loss	-	-	-
Comparison	OPGP295	2p25.1	2	12602820	12617025	14206	Loss	-	-	-
Comparison	OPGP296	2p25.1	2	12602820	12617025	14206	Loss	-	-	-
Comparison	OPGP12	2p24.3	2	13958075	14652091	694017	Loss	Yes	-	-
Comparison	OPGP218	2p24.1	2	22366001	22459477	93477	Loss	Yes	-	-
Comparison	OPGP227	2p24.1	2	23379382	23412430	33049	Loss	Yes	-	-
Comparison	OPGP250	2p23.3	2	27618812	27633022	14211	Loss	-	-	-
Comparison	OPGP100	2p23.1	2	30668502	30706804	38303	Loss	-	-	-
Comparison	OPGP67	2p23.1	2	31278104	31321880	43777	Loss	-	<i>CAPN14; EHD3</i>	-
Comparison	OPGP340	2p23.1	2	31278104	31321880	43777	Loss	-	<i>CAPN14; EHD3</i>	-
Comparison	OPGP311	2p22.3	2	32837941	32896033	58093	Gain	-	<i>TTC27</i>	-
Comparison	OPGP7	2p22.3	2	35198444	35265044	66601	Loss	Yes	-	-
Comparison	OPGP336	2p22.3	2	35435011	35469179	34169	Loss	-	-	-
Comparison	OPGP79	2p22.1	2	40069967	40309879	239913	Gain	Yes	<i>SLC8A1</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP368	2p22.1	2	40269877	40286924	17048	Loss	-		-
Comparison	OPGP41	2p22.1	2	40998583	41084439	85857	Loss	Yes		-
Comparison	OPGP364	2p22.1	2	40998583	41084439	85857	Loss	Yes		-
Comparison	OPGP46	2p21	2	44596021	44621047	25027	Loss	Yes		-
Comparison	OPGP131	2p21	2	45165866	45185408	19543	Gain	-		-
Comparison	OPGP156	2p21	2	45165866	45185408	19543	Gain	-		-
Comparison	OPGP314	2p21	2	45165866	45181807	15942	Gain	-		-
Comparison	OPGP162	2p21	2	45334332	45381926	47595	Loss	Yes		-
Comparison	OPGP203	2p16.3	2	51190991	51211206	20216	Loss	Yes		-
Comparison	OPGP26	2p16.3,2p16.2	2	52682617	52747003	64387	Loss	-		-
Comparison	OPGP8	2p16.2	2	53383061	53406900	23840	Loss	-		-
Comparison	OPGP81	2p16.2	2	53537059	53562047	24989	Loss	Yes		-
Comparison	OPGP99	2p16.1	2	55893434	55981843	88410	Loss	Yes	<i>EFEMP1</i>	-
Comparison	OPGP168	2p16.1	2	57446156	57535320	89165	Gain	Yes		-
Comparison	OPGP123	2p16.1	2	59157327	59178260	20934	Gain	Yes		-
Comparison	OPGP318	2p15	2	61800352	61816406	16055	Loss	-		-
Comparison	OPGP226	2p13.2	2	73729307	73787035	57729	Gain	-	<i>NAT8B</i>	-
Comparison	OPGP68	2p12	2	77084854	77108672	23819	Gain	Yes		-
Comparison	OPGP13	2p12	2	78599709	78663818	64110	Loss	Yes		-
Comparison	OPGP212	2p12	2	80217697	80268753	51057	Loss	Yes		-
Comparison	OPGP165	2p12	2	82866310	83147178	280869	Loss	Yes		-
Comparison	OPGP225	2p11.2	2	87015364	87230132	214769	Gain	-	<i>RGPD1; RGPD2; PLGLB1; PLGLB2</i>	-
Comparison	OPGP5	2p11.2	2	88907418	88992571	85154	Gain	Yes		-
Comparison	OPGP303	2p11.2	2	88907418	88992571	85154	Gain	Yes		-
Comparison	OPGP65	2q11.2	2	97833460	98182442	348983	Gain	-	<i>TMEM131; VWA3B</i>	-
Comparison	OPGP117	2q12.3	2	107763445	107781596	18152	Loss	Yes		-
Comparison	OPGP244	2q13	2	109618962	110061321	442360	Gain	-	<i>SEPT10; SOWAHC; RGPD5; RGPD6; RGPD8; LIMS3; LIMS3L</i>	-
Comparison	OPGP166	2q14.3	2	129180187	129229752	49566	Gain	Yes		-
Comparison	OPGP233	2q21.1	2	131194418	131222786	28369	Gain	Yes	<i>GPR148</i>	-
Comparison	OPGP186	2q22.1	2	136737724	136759546	21823	Loss	Yes		-
Comparison	OPGP106	2q22.1	2	137392303	137434487	42185	Loss	Yes		-
Comparison	OPGP30	2q22.1	2	137640231	137939320	299090	Loss	Yes	<i>THSD7B</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP353	2q22.2	2	143884436	143918742	34307	Gain		<i>ARHGAP15</i>	-
Comparison	OPGP367	2q23.1	2	148728411	148781340	52930	Loss	Yes	-	-
Comparison	OPGP257	2q31.1	2	175315568	175338721	23154	Loss	Yes	<i>CHRNA1</i>	-
Comparison	OPGP132	2q31.2	2	179561710	179605627	43918	Loss	Yes	-	-
Comparison	OPGP306	2q32.1	2	183223185	183279605	56421	Loss	Yes	-	-
Comparison	OPGP284	2q32.1	2	186661171	186815412	154242	Loss		-	-
Comparison	OPGP114	2q33.1	2	197249313	197663025	413713	Gain	Yes	<i>CCDC150; GTF3C3; C2orf66; PGAP1; ANKRD44</i>	-
Comparison	OPGP53	2q33.1	2	199419959	199545890	125932	Gain	Yes	-	-
Comparison	OPGP174	2q33.3,2q33.2	2	205563673	205663716	100044	Loss	Yes	<i>PARD3B</i>	-
Comparison	OPGP142	2q34	2	209797472	209824594	27123	Gain		-	-
Comparison	OPGP166	2q34	2	212798254	212889567	91314	Loss	Yes	-	-
Comparison	OPGP337	2q34	2	214308244	214325958	17715	Loss	Yes	-	-
Comparison	OPGP205	2q34	2	214807471	214825189	17719	Gain		-	-
Comparison	OPGP123	2q34	2	214816268	214830633	14366	Gain		-	-
Comparison	OPGP101	2q35	2	220443022	220464396	21375	Gain		-	-
Comparison	OPGP4	2q37.1	2	230884307	230966859	82553	Gain		<i>SPI40; SPI40L</i>	-
Comparison	OPGP1	2q37.1	2	231122629	231137464	14836	Gain	Yes	-	-
Comparison	OPGP136	2q37.2	2	235871664	236172371	300708	Gain	Yes	<i>AGAP1</i>	-
Comparison	OPGP53	2q37.2	2	236167740	236196122	28383	Loss		-	-
Comparison	OPGP136	2q37.3,2q37.2	2	236798401	237062102	263702	Gain	Yes	<i>ASB18; IQCA1</i>	-
Comparison	OPGP88	2q37.3	2	237295053	237338319	43267	Loss	Yes	-	-
Comparison	OPGP134	3p26.3	3	1714339	1768951	54613	Loss	Yes	-	-
Comparison	OPGP148	3p26.3	3	1779655	1805430	25776	Loss	Yes	-	-
Comparison	OPGP200	3p26.3	3	1849179	1870850	21672	Loss		-	-
Comparison	OPGP180	3p26.3	3	1904322	1927460	23139	Loss	Yes	-	-
Comparison	OPGP72	3p26.2	3	4156405	4212036	55632	Loss		-	-
Comparison	OPGP107	3p26.2	3	5364179	5411289	47111	Loss	Yes	-	-
Comparison	OPGP151	3p26.2	3	5364179	5411289	47111	Loss	Yes	-	-
Comparison	OPGP308	3p26.1	3	5582285	5607263	24979	Loss	Yes	-	-
Comparison	OPGP85	3p26.1	3	6546105	6573353	27249	Loss	Yes	-	-
Comparison	OPGP146	3p25.3	3	10412280	10432394	20115	Gain		<i>ATP2B2</i>	-
Comparison	OPGP19	3p25.1	3	12543425	12648371	104947	Gain	Yes	<i>TSEN2; C3orf83; MKRN2; RAF1</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP70	3p24.3	3	15964963	15989921	24959	Loss	Yes	-	-
Comparison	OPGP225	3p24.3	3	17894426	17923351	28926	Loss	-	-	-
Comparison	OPGP24	3p24.3	3	22212602	22280792	68191	Gain	Yes	-	-
Comparison	OPGP240	3p24.3,3p24.2	3	23658782	23819436	160655	Gain	Yes	-	-
Comparison	OPGP199	3p24.2,3p24.1	3	26352082	26423930	71849	Loss	Yes	-	-
Comparison	OPGP345	3p22.3	3	34701725	34781687	79963	Loss	Yes	-	-
Comparison	OPGP208	3p22.3	3	34884209	34916077	31869	Loss	Yes	-	-
Comparison	OPGP53	3p22.1	3	41068579	41120029	51451	Loss	-	-	-
Comparison	OPGP268	3p22.1	3	41332836	41799436	466601	Loss	-	<i>ULK4</i>	-
Comparison	OPGP192	3p22.1	3	41776668	41866580	89913	Loss	Yes	<i>ULK4</i>	-
Comparison	OPGP86	3p21.31	3	47902746	48007417	104672	Gain	-	<i>MAP4</i>	-
Comparison	OPGP334	3p21.1	3	53722720	53895962	173243	Gain	Yes	<i>CACNAID; CHDH; IL17RB; ACTR8; SELK</i>	-
Comparison	OPGP265	3p14.2	3	59829199	61005753	1176555	Loss	Yes	<i>FHIT</i>	-
Comparison	OPGP184	3p14.2	3	61633955	61693625	59671	Loss	-	-	-
Comparison	OPGP229	3p14.2	3	61633955	61693625	59671	Loss	-	-	-
Comparison	OPGP4	3p14.1	3	65647659	65693144	45486	Loss	Yes	-	-
Comparison	OPGP216	3p11.2	3	88024990	88066652	41663	Gain	-	-	-
Comparison	OPGP132	3q13.11	3	105512260	105564637	52378	Loss	Yes	-	-
Comparison	OPGP328	3q13.12	3	107896596	107950455	53860	Gain	Yes	-	-
Comparison	OPGP346	3q13.12, 3q13.13	3	109497937	109760767	262831	Gain	Yes	<i>HHLA2; MYH15; KIAA1524</i>	-
Comparison	OPGP131	3q13.13	3	109908932	110134824	225893	Loss	Yes	<i>RETNLB; TRATI; GUCA1C</i>	-
Comparison	OPGP350	3q21.1	3	123880407	124235121	354715	Gain	Yes	<i>PARP14; HSPBAP1; DIRC2; SEMA5B</i>	-
Comparison	OPGP151	3q24	3	144956132	145145097	188966	Loss	Yes	<i>SLC9A9</i>	-
Comparison	OPGP91	3q24	3	145665527	145678368	12842	Loss	Yes	-	-
Comparison	OPGP147	3q24	3	147125201	147144641	19441	Loss	Yes	-	-
Comparison	OPGP4	3q25.2	3	154870103	155031925	161823	Gain	Yes	-	-
Comparison	OPGP147	3q26.1	3	163520556	163606060	85505	Loss	Yes	-	-
Comparison	OPGP64	3q26.1	3	166179336	166273847	94512	Gain	Yes	<i>SI</i>	-
Comparison	OPGP66	3q26.1	3	168005537	168032644	27108	Gain	-	-	-
Comparison	OPGP78	3q26.31	3	175583102	175596822	13721	Loss	-	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP345	3q26.31	3	176569482	177229640	660159	Loss	Yes	<i>NAALADL2</i>	hsa-miR-4789-5p; hsa-miR-4789-3p
Comparison	OPGP29	3q26.32	3	180365866	180412251	46386	Gain		<i>PIK3CA</i>	-
Comparison	OPGP360	3q26.33	3	183836513	183862220	25708	Loss	Yes	-	-
Comparison	OPGP166	3q27.3	3	187868833	187900465	31633	Loss		<i>HRG</i>	-
Comparison	OPGP275	3q27.3	3	187869119	187904832	35714	Loss		<i>HRG</i>	-
Comparison	OPGP228	3q27.3	3	187869253	187904832	35580	Loss		<i>HRG</i>	-
Comparison	OPGP324	3q28	3	191159675	191482446	322772	Loss	Yes	<i>LEPREL1</i>	-
Comparison	OPGP175	3q28	3	193459773	193499362	39590	Loss	Yes	-	-
Comparison	OPGP319	3q29	3	195719679	195750493	30815	Gain	Yes	-	-
Comparison	OPGP275	3q29	3	199157125	199170719	13595	Gain	Yes	<i>RPL35A</i>	-
Comparison	OPGP310	4p16.3	4	1042239	1107925	65687	Gain	Yes	<i>RNF212</i>	-
Comparison	OPGP50	4p16.3	4	2355110	2366882	11773	Gain	Yes	-	-
Comparison	OPGP246	4p16.3	4	2933890	2980407	46518	Gain	Yes	<i>NOPI4; GRK4</i>	-
Comparison	OPGP216	4p16.1	4	8771068	9095185	324118	Loss		<i>USP17L10; USP17L11; USP17L12; USP17L13; USP17L17; USP17L18; USP17L19; USP17L20; USP17L21; USP17L22; USP17L24; USP17L25; USP17L26; USP17L27; USP17L28; USP17L29; USP17L30; USP17L5; USP17L15; DEFB131; LOC650293</i>	-
Comparison	OPGP35	4p16.1	4	9853711	9890922	37212	Loss	Yes	-	-
Comparison	OPGP157	4p15.33	4	11520578	11535961	15384	Gain		-	-
Comparison	OPGP26	4p15.32	4	15385279	15445335	60057	Gain		<i>CD38</i>	-
Comparison	OPGP251	4p15.31	4	19220177	19264426	44250	Loss	Yes	-	-
Comparison	OPGP161	4p15.31	4	21152913	21175276	22364	Loss	Yes	-	-
Comparison	OPGP89	4p15.1	4	28348262	28474772	126511	Loss	Yes	-	hsa-miR-4275
Comparison	OPGP348	4p14	4	39602122	39791634	189513	Gain	Yes	<i>PDS5A; N4BP2</i>	-
Comparison	OPGP264	4p14	4	39692394	39737695	45302	Gain	Yes	-	-
Comparison	OPGP252	4p13	4	43325028	43371077	46050	Loss	Yes	-	-
Comparison	OPGP176	4q12	4	56819933	56837598	17666	Gain	Yes	-	-
Comparison	OPGP85	4q12	4	57833449	58261378	427930	Gain		-	-
Comparison	OPGP161	4q13.1	4	61782145	61793725	11581	Loss		-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP269	4q13.1	4	62227896	62267377	39482	Loss	Yes	-	-
Comparison	OPGP80	4q13.2	4	68532905	68560171	27267	Loss		-	-
Comparison	OPGP266	4q13.2	4	69705096	69751804	46709	Loss		<i>UGT2B10</i>	-
Comparison	OPGP22	4q13.3	4	73100660	73122182	21523	Loss	Yes	<i>NPFFR2</i>	-
Comparison	OPGP1	4q21.21	4	79908025	79924975	16951	Gain	Yes	<i>BMP2K</i>	-
Comparison	OPGP166	4q21.22	4	82700206	82738912	38707	Loss	Yes	-	-
Comparison	OPGP70	4q22.1	4	91887762	91959857	72096	Gain	Yes	<i>CCSER1</i>	-
Comparison	OPGP129	4q22.1	4	92407654	92476614	68961	Gain		-	-
Comparison	OPGP214	4q22.1	4	93106668	93402805	296138	Loss		-	-
Comparison	OPGP366	4q22.1	4	93692083	93709753	17671	Loss	Yes	-	-
Comparison	OPGP331	4q22.2	4	95258776	95282631	23856	Gain	Yes	-	-
Comparison	OPGP219	4q23	4	102038141	102103608	65468	Loss	Yes	-	-
Comparison	OPGP227	4q24	4	102944497	102981734	37238	Gain	Yes	<i>BANK1</i>	-
Comparison	OPGP336	4q24	4	103825185	103864128	38944	Gain	Yes	<i>MANBA</i>	-
Comparison	OPGP49	4q24	4	104111158	104147496	36339	Loss	Yes	<i>SLC9B1</i>	-
Comparison	OPGP268	4q24	4	107498899	107618439	119541	Gain		<i>GIMDI</i>	-
Comparison	OPGP219	4q25	4	112516864	112529063	12200	Loss	Yes	-	-
Comparison	OPGP298	4q25	4	113267887	113324725	56839	Gain	Yes	<i>C4orf32</i>	-
Comparison	OPGP67	4q26	4	116420120	116437050	16931	Loss	Yes	-	-
Comparison	OPGP131	4q26	4	116422771	116438169	15399	Loss	Yes	-	-
Comparison	OPGP338	4q26	4	117070336	117987237	916902	Gain	Yes	-	hsa-miR-1973
Comparison	OPGP47	4q26	4	117630141	117726424	96284	Gain	Yes	-	-
Comparison	OPGP204	4q28.1	4	127458501	127673045	214545	Loss	Yes	-	-
Comparison	OPGP216	4q28.2	4	129993331	130142984	149654	Gain		<i>PHF17; SCLT1</i>	-
Comparison	OPGP270	4q28.2	4	131182407	131224159	41753	Loss	Yes	-	-
Comparison	OPGP84	4q28.3	4	135557772	135614100	56329	Gain		-	-
Comparison	OPGP95	4q28.3	4	135636764	135746833	110070	Loss	Yes	-	-
Comparison	OPGP338	4q28.3	4	136594287	138635305	2041019	Loss	Yes	-	-
Comparison	OPGP294	4q28.3	4	138083646	138098754	15109	Loss	Yes	-	-
Comparison	OPGP283	4q31.1	4	139893157	139927943	34787	Loss	Yes	-	-
Comparison	OPGP154	4q31.21	4	143025931	143050531	24601	Gain	Yes	-	-
Comparison	OPGP349	4q31.23	4	148961558	149040682	79125	Loss	Yes	<i>ARHGAP10</i>	-
Comparison	OPGP277	4q32.1	4	155304052	155331427	27376	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP74	4q32.1	4	157098371	157119459	21089	Loss	Yes	-	-
Comparison	OPGP118	4q32.1	4	160707810	160718617	10808	Loss	Yes	-	-
Comparison	OPGP283	4q32.2	4	161769134	161895127	125994	Loss	Yes	-	-
Comparison	OPGP335	4q32.2	4	162022141	162050907	28767	Loss	Yes	-	-
Comparison	OPGP43	4q32.2	4	163381909	163402576	20668	Loss	Yes	-	-
Comparison	OPGP150	4q32.3	4	166213561	166244840	31280	Loss	Yes	<i>TMEM192</i>	-
Comparison	OPGP347	4q32.3	4	167741303	167828197	86895	Gain	Yes	-	-
Comparison	OPGP214	4q34.1	4	173073090	173099352	26263	Loss	-	-	-
Comparison	OPGP235	4q34.3	4	179672854	179697140	24287	Loss	Yes	-	-
Comparison	OPGP343	4q34.3	4	182157291	182182771	25481	Loss	Yes	-	-
Comparison	OPGP4	4q35.1	4	182728030	182790037	62008	Loss	Yes	-	-
Comparison	OPGP215	4q35.1	4	185971583	185996924	25342	Loss	Yes	-	-
Comparison	OPGP283	4q35.2	4	188089824	188686081	596258	Loss	Yes	-	-
Comparison	OPGP306	4q35.2	4	188531974	188763652	231679	Gain	Yes	-	-
Comparison	OPGP306	4q35.2	4	189413170	189712337	299168	Gain	-	-	-
Comparison	OPGP292	4q35.2	4	190260773	191261904	1001132	Loss	Yes	<i>FRG1; FRG2; LOC100288255; DUX4; DUX4L2; DUX4L3; DUX4L4; DUX4L5; DUX4L6; DUX2; DUX4L7; LOC100653046</i>	-
Comparison	OPGP87	4q35.2	4	190922957	191044517	121561	Gain	-	-	-
Comparison	OPGP109	5p15.33	5	641475	734302	92828	Gain	-	<i>CEP72; TPPP</i>	-
Comparison	OPGP26	5p15.33	5	853686	886627	32942	Loss	-	<i>ZDHHC11</i>	-
Comparison	OPGP234	5p15.33	5	870850	928018	57169	Gain	-	<i>ZDHHC11; BRD9</i>	-
Comparison	OPGP332	5p15.33	5	870850	928018	57169	Gain	-	<i>ZDHHC11; BRD9</i>	-
Comparison	OPGP316	5p15.33	5	1055489	1274261	218773	Gain	Yes	<i>NKD2; SLC12A7; SLC6A19</i>	hsa-miR-4635
Comparison	OPGP234	5p15.2	5	11798512	11820720	22209	Gain	Yes	-	-
Comparison	OPGP118	5p15.2	5	12251381	12493224	241844	Loss	Yes	-	-
Comparison	OPGP327	5p15.2	5	12568638	12705832	137195	Loss	-	-	-
Comparison	OPGP62	5p15.2	5	12626329	12835171	208843	Loss	-	-	-
Comparison	OPGP23	5p15.2	5	12833942	13290184	456243	Gain	Yes	-	-
Comparison	OPGP44	5p15.1	5	16243137	16286148	43012	Loss	Yes	-	-
Comparison	OPGP155	5p15.1	5	17687887	17816216	128330	Loss	-	-	-
Comparison	OPGP202	5p14.3	5	18608303	18622391	14089	Gain	Yes	-	-
Comparison	OPGP130	5p14.3	5	18619043	18668748	49706	Loss	-	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP83	5p14.3	5	19032838	19044681	11844	Gain	-		-
Comparison	OPGP71	5p14.3	5	19053377	19084750	31374	Gain	Yes		-
Comparison	OPGP83	5p14.3	5	19318840	19348690	29851	Gain	Yes		-
Comparison	OPGP113	5p14.3	5	21885181	22025871	140691	Loss	Yes	<i>CDH12</i>	-
Comparison	OPGP74	5p14.1	5	26160848	26270673	109826	Gain	Yes		-
Comparison	OPGP217	5p13.3	5	29372002	29444560	72559	Loss	Yes		-
Comparison	OPGP208	5p13.2	5	35894768	35905874	11107	Loss	Yes	<i>IL7R</i>	-
Comparison	OPGP212	5p13.2	5	36484652	36500131	15480	Loss			-
Comparison	OPGP256	5p13.2	5	36484652	36500131	15480	Loss			-
Comparison	OPGP132	5p12	5	43672941	44261062	588122	Gain	Yes	<i>NNT</i>	-
Comparison	OPGP306	5p12	5	44166372	44261062	94691	Loss	Yes		-
Comparison	OPGP182	5q11.2	5	56382095	56399764	17670	Loss	Yes		-
Comparison	OPGP349	5q11.2	5	56713368	57357403	644036	Gain	Yes	<i>ACTBL2</i>	-
Comparison	OPGP205	5q11.2	5	57326837	57369290	42454	Gain			-
Comparison	OPGP132	5q11.2	5	57890289	57931235	40947	Gain	Yes	<i>RAB3C</i>	-
Comparison	OPGP246	5q12.1	5	61838573	62004154	165582	Gain	Yes	<i>IPO11; LRRC70</i>	-
Comparison	OPGP166	5q12.3	5	63974156	64241132	266977	Gain	Yes	<i>FAM159B; SREK1IP1; CWC27</i>	-
Comparison	OPGP3	5q13.3	5	75467195	75486315	19121	Gain			-
Comparison	OPGP221	5q13.3	5	75647353	75682250	34898	Gain	Yes	<i>SV2C</i>	-
Comparison	OPGP154	5q14.1	5	78206284	78270717	64434	Gain		<i>ARSB</i>	-
Comparison	OPGP154	5q14.1	5	78424694	78481227	56534	Gain		<i>BHMT</i>	-
Comparison	OPGP83	5q14.2	5	82547252	82727044	179793	Gain	Yes	<i>XRCC4</i>	-
Comparison	OPGP17	5q14.3	5	83813535	83948279	134745	Loss			-
Comparison	OPGP20	5q14.3	5	86780522	86821528	41007	Loss	Yes		-
Comparison	OPGP295	5q21.1	5	99669534	99697197	27664	Loss			-
Comparison	OPGP130	5q21.1	5	101083537	101123064	39528	Gain			-
Comparison	OPGP370	5q21.1	5	101219884	101283816	63933	Gain			-
Comparison	OPGP188	5q21.1,5q21.2	5	102751434	102809432	57999	Gain	Yes		-
Comparison	OPGP58	5q21.2	5	104262266	104280607	18342	Gain	Yes		-
Comparison	OPGP287	5q21.2	5	104283519	104385201	101683	Loss			-
Comparison	OPGP150	5q21.3	5	104594666	104627852	33187	Loss	Yes		-
Comparison	OPGP105	5q21.3	5	107390269	107475020	84752	Loss	Yes		-
Comparison	OPGP105	5q21.3	5	107527862	107543600	15739	Gain	Yes		-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP20	5q21.3	5	109295971	109392292	96322	Gain	-		-
Comparison	OPGP276	5q22.1	5	110250786	110266346	15561	Loss	Yes		-
Comparison	OPGP94	5q22.2	5	112756381	112797440	41060	Loss	Yes	<i>TSSK1B</i>	-
Comparison	OPGP62	5q22.3	5	113106234	113213272	107039	Loss	-		-
Comparison	OPGP345	5q23.1	5	115661373	115704298	42926	Loss	Yes		-
Comparison	OPGP185	5q23.1	5	117768399	118049462	281064	Loss	Yes		-
Comparison	OPGP103	5q23.1	5	120083229	120099754	16526	Gain	-		-
Comparison	OPGP118	5q23.1	5	120083229	120096270	13042	Gain	-		-
Comparison	OPGP343	5q23.1	5	120084534	120099754	15221	Gain	-		-
Comparison	OPGP247	5q23.3, 5q31.1	5	130013729	131087508	1073780	Gain	Yes	<i>HINT1; LYRM7; CDC42SE2; RAPGEF6; FNIP1</i>	-
Comparison	OPGP175	5q31.1	5	134047374	134143412	96039	Gain	Yes	<i>SEC24A; CAMLG; DDX46</i>	-
Comparison	OPGP58	5q32	5	143624001	143665623	41623	Gain	Yes		-
Comparison	OPGP223	5q33.1	5	149576572	149605730	29159	Gain	Yes	<i>CAMK2A</i>	-
Comparison	OPGP181	5q33.2	5	152906598	152964673	58076	Gain	Yes		-
Comparison	OPGP185	5q33.3	5	156334768	156580366	245599	Gain	Yes	<i>HAVCR1; HAVCR2; MED7; FAM71B; ITK</i>	-
Comparison	OPGP152	5q34	5	165653184	165666864	13681	Loss	Yes		-
Comparison	OPGP53	5q34	5	165771420	165782533	11114	Loss	Yes		-
Comparison	OPGP19	5q34	5	166750150	166766453	16304	Loss	Yes		-
Comparison	OPGP358	5q35.2	5	173488073	173592953	104881	Gain	Yes		-
Comparison	OPGP13	5q35.2	5	175409726	175583090	173365	Gain	-	<i>FAM153B</i>	-
Comparison	OPGP367	5q35.3	5	178662194	178863916	201723	Gain	-	<i>ADAMTS2</i>	-
Comparison	OPGP242	5q35.3	5	179381594	179443248	61655	Loss	Yes	<i>RNF130</i>	-
Comparison	OPGP4	5q35.3	5	179802201	180278690	476490	Gain	Yes	<i>CNOT6; SCGB3A1; FLT4; OR2Y1; MGAT1; ZFP62; BTNL8</i>	-
Comparison	OPGP317	5q35.3	5	180508099	180541223	33125	Gain	-	<i>OR2V2</i>	-
Comparison	OPGP350	6p25.3	6	94661	167304	72644	Loss	Yes		-
Comparison	OPGP155	6p25.1	6	5315611	5503575	187965	Loss	Yes	<i>FARS2</i>	-
Comparison	OPGP367	6p25.1	6	5501696	5524811	23116	Loss	-		-
Comparison	OPGP177	6p25.1	6	5511771	5532548	20778	Loss	-		-
Comparison	OPGP47	6p24.3	6	8537498	8664123	126626	Loss	-		-
Comparison	OPGP100	6p24.3	6	8975313	8987431	12119	Gain	Yes		-
Comparison	OPGP320	6p22.3	6	17565591	17788094	222504	Gain	Yes	<i>CAP2; FAM8A1; NUP153</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP118	6p22.3	6	19005366	19016871	11506	Loss	Yes	-	-
Comparison	OPGP157	6p22.1	6	26826110	26906239	80130	Gain	-	-	-
Comparison	OPGP339	6p22.1	6	27229203	27273066	43864	Loss	Yes	-	-
Comparison	OPGP13	6p22.1	6	27285322	27313308	27987	Loss	-	-	-
Comparison	OPGP229	6p22.1	6	28502550	28762131	259582	Gain	Yes	<i>ZSCAN23; GPX6; GPX5; SCAND3</i>	-
Comparison	OPGP148	6p22.1	6	29204012	29269414	65403	Loss	-	<i>OR2J2</i>	-
Comparison	OPGP145	6p22.1	6	29364297	29382592	18296	Loss	Yes	<i>OR14J1</i>	-
Comparison	OPGP346	6p21.31	6	36385529	36410188	24660	Loss	Yes	<i>C6orf222</i>	-
Comparison	OPGP136	6p21.2	6	37599494	37609945	10452	Loss	Yes	-	-
Comparison	OPGP267	6p21.2	6	37941581	38260407	318827	Gain	Yes	<i>ZFAND3; BTBD9</i>	-
Comparison	OPGP106	6p21.1	6	42010033	42023695	13663	Gain	Yes	<i>CCND3</i>	-
Comparison	OPGP152	6p12.3	6	46062737	46182615	119879	Gain	Yes	<i>CLIC5</i>	-
Comparison	OPGP24	6p12.3	6	46182615	46266012	83398	Gain	Yes	<i>ENPP4; ENPP5</i>	-
Comparison	OPGP314	6p12.3	6	49641246	49673535	32290	Loss	Yes	-	-
Comparison	OPGP366	6p12.3	6	50305498	50317332	11835	Loss	Yes	-	-
Comparison	OPGP178	6p11.2	6	57210013	57249352	39340	Loss	Yes	-	-
Comparison	OPGP242	6p11.2	6	57520153	57739367	219215	Gain	-	<i>PRIM2</i>	-
Comparison	OPGP306	6p11.2	6	57583613	57851962	268350	Gain	-	<i>PRIM2</i>	-
Comparison	OPGP306	6p11.1	6	58464990	58882675	417686	Gain	-	-	-
Comparison	OPGP196	6q12	6	63659441	63711303	51863	Loss	Yes	-	-
Comparison	OPGP274	6q12	6	65659578	65714245	54668	Loss	Yes	<i>EYS</i>	-
Comparison	OPGP20	6q12	6	65954266	66545669	591404	Gain	Yes	<i>EYS; LOC441155</i>	-
Comparison	OPGP141	6q12	6	67189492	67395975	206484	Gain	Yes	-	-
Comparison	OPGP290	6q12	6	68731624	68793856	62233	Gain	Yes	-	-
Comparison	OPGP196	6q13	6	70308225	70323543	15319	Loss	-	-	-
Comparison	OPGP48	6q13	6	74357229	74478448	121220	Gain	-	<i>SLC17A5; CD109</i>	-
Comparison	OPGP262	6q14.1	6	76206233	76253570	47338	Loss	Yes	-	-
Comparison	OPGP259	6q14.1	6	76943707	76957012	13306	Loss	Yes	-	-
Comparison	OPGP352	6q14.1	6	78800008	79185019	385012	Gain	-	-	-
Comparison	OPGP272	6q14.3	6	86531087	86606761	75675	Loss	-	-	-
Comparison	OPGP242	6q15	6	89794375	89826935	32561	Loss	Yes	-	-
Comparison	OPGP347	6q16.1	6	92817483	92839706	22224	Gain	Yes	-	-
Comparison	OPGP174	6q16.1	6	93600268	93650997	50730	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP226	6q16.1	6	95602570	95616875	14306	Gain	-		-
Comparison	OPGP311	6q16.1	6	95602570	95616875	14306	Gain	-		-
Comparison	OPGP4	6q16.1	6	95673830	95724798	50969	Loss	Yes		-
Comparison	OPGP271	6q16.1	6	97308647	97318780	10134	Loss	-		-
Comparison	OPGP101	6q16.3	6	103237557	103262085	24529	Loss	Yes		-
Comparison	OPGP192	6q21	6	110344844	110400167	55324	Loss	Yes		-
Comparison	OPGP311	6q21	6	112734333	112749019	14687	Loss	-		-
Comparison	OPGP48	6q22.1	6	116529448	116858777	329330	Gain	Yes	<i>NT5DC1; COL10A1; TSPYL4; TSPYL1; DSE</i>	-
Comparison	OPGP246	6q22.31	6	118833801	118992695	158895	Gain	-	<i>CEP85L; PLN</i>	-
Comparison	OPGP34	6q22.31	6	118838161	118967398	129238	Gain	Yes	<i>CEP85L</i>	-
Comparison	OPGP212	6q22.31	6	118910606	118920621	10016	Loss	Yes	<i>CEP85L</i>	-
Comparison	OPGP285	6q22.31	6	120388063	120490882	102820	Loss	Yes	-	-
Comparison	OPGP254	6q22.31	6	121335988	121555376	219389	Loss	Yes	<i>C6orf170</i>	-
Comparison	OPGP187	6q23.2	6	132963213	133093570	130358	Loss	Yes	<i>TAAR2; TAARI; VNNI</i>	-
Comparison	OPGP334	6q24.1	6	141022503	141104763	82261	Gain	Yes	-	hsa-miR-4465
Comparison	OPGP351	6q24.1	6	142565022	142614314	49293	Loss	Yes	<i>VTAL</i>	-
Comparison	OPGP237	6q24.2	6	145228847	145242898	14052	Gain	-		-
Comparison	OPGP263	6q25.1	6	150221702	150341162	119461	Loss	Yes	<i>LRP11; RAET1E; RAET1G; ULBP2; ULBP1</i>	-
Comparison	OPGP71	6q25.1	6	150450639	150467215	16577	Loss	-		-
Comparison	OPGP333	6q25.2	6	152964606	152997648	33043	Loss	Yes	<i>SYNE1</i>	-
Comparison	OPGP54	6q26	6	161518941	161734297	215357	Gain	-	<i>AGPAT4; PARK2</i>	-
Comparison	OPGP300	6q26	6	162543883	162568904	25022	Loss	-		-
Comparison	OPGP359	6q26	6	162911821	162979417	67597	Loss	-		-
Comparison	OPGP108	7p22.3	7	837774	984755	146982	Loss	Yes	<i>SUN1; GET4; ADAP1; COX19</i>	-
Comparison	OPGP185	7p22.3,7p22.2	7	2079588	2224642	145055	Loss	Yes	<i>MAD1L1</i>	-
Comparison	OPGP111	7p22.2	7	3043205	3055596	12392	Gain	Yes	-	-
Comparison	OPGP354	7p22.2	7	3689681	3702780	13100	Loss	Yes	-	-
Comparison	OPGP8	7p22.1	7	4910457	4927869	17413	Loss	Yes	<i>MMD2</i>	-
Comparison	OPGP193	7p22.1	7	4910457	4922064	11608	Loss	Yes	<i>MMD2</i>	-
Comparison	OPGP206	7p21.3,7p22.1	7	7170546	7245535	74990	Loss	Yes	<i>CIGALT1</i>	-
Comparison	OPGP271	7p21.3	7	7464930	7567379	102450	Loss	Yes	<i>COL28A1</i>	-
Comparison	OPGP38	7p21.3	7	8322114	8686211	364098	Gain	Yes	<i>NXPH1</i>	-
Comparison	OPGP188	7p21.3	7	8925485	9000195	74711	Gain	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP346	7p21.3	7	9471158	9501930	30773	Gain	Yes	-	-
Comparison	OPGP106	7p21.3	7	10368265	10622487	254223	Loss	Yes	-	-
Comparison	OPGP97	7p21.3	7	10534216	10569097	34882	Loss	Yes	-	-
Comparison	OPGP362	7p21.3	7	11277010	11324760	47751	Loss	-	-	-
Comparison	OPGP215	7p21.3	7	12234020	12307224	73205	Gain	Yes	<i>TMEM106B</i>	-
Comparison	OPGP79	7p21.2	7	13553937	13564466	10530	Loss	-	-	-
Comparison	OPGP30	7p21.2	7	15028484	15085410	56927	Loss	-	-	-
Comparison	OPGP370	7p21.1	7	15369491	15391936	22446	Loss	-	<i>AGMO</i>	-
Comparison	OPGP215	7p21.1	7	16003433	16035549	32117	Loss	Yes	-	-
Comparison	OPGP77	7p21.1	7	16121832	16197707	75876	Loss	Yes	-	-
Comparison	OPGP74	7p21.1	7	17017534	17033970	16437	Loss	Yes	-	-
Comparison	OPGP344	7p21.1	7	17092924	17154865	61942	Loss	Yes	-	-
Comparison	OPGP170	7p15.3	7	20003498	20039131	35634	Loss	Yes	-	-
Comparison	OPGP49	7p15.3	7	20100754	20150035	49282	Loss	Yes	<i>MACC1</i>	-
Comparison	OPGP152	7p15.2	7	24958926	24984487	25562	Loss	Yes	-	-
Comparison	OPGP160	7p15.2	7	25081173	25108084	26912	Loss	Yes	-	-
Comparison	OPGP251	7p14.3	7	31945813	31984018	38206	Loss	Yes	-	-
Comparison	OPGP311	7p14.3	7	33874598	33885395	10798	Loss	Yes	-	-
Comparison	OPGP7	7p14.2	7	37363787	37439919	76133	Loss	Yes	-	-
Comparison	OPGP48	7p14.1	7	38260626	38296343	35718	Loss	-	<i>TARP</i>	-
Comparison	OPGP183	7p14.1	7	38277248	38307592	30345	Loss	-	-	-
Comparison	OPGP97	7p14.1	7	38284095	38301648	17554	Loss	-	-	-
Comparison	OPGP95	7p14.1	7	38292303	38333037	40735	Loss	-	-	-
Comparison	OPGP265	7p11.2	7	54277220	54374624	97405	Gain	Yes	-	-
Comparison	OPGP233	7p11.2	7	56038888	56115518	76631	Gain	-	<i>PSPH; CCT6A; SUMF2</i>	-
Comparison	OPGP235	7q11.21	7	61445025	61488622	43598	Loss	-	-	-
Comparison	OPGP188	7q11.21	7	61477137	61495810	18674	Loss	-	-	-
Comparison	OPGP137	7q11.21	7	63771570	63912686	141117	Loss	Yes	<i>ZNF107; ZNF138</i>	hsa-miR-6839-5p; hsa-miR-6839-3p
Comparison	OPGP45	7q11.21	7	64703608	64820943	117336	Loss	-	-	-
Comparison	OPGP43	7q11.22	7	69826272	69862679	36408	Loss	-	-	-
Comparison	OPGP254	7q11.22	7	69952960	70227885	274926	Gain	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP296	7q11.22	7	71303353	71352194	48842	Loss	Yes	-	-
Comparison	OPGP290	7q11.23	7	71844371	71903709	59339	Loss		<i>TYW1B</i>	-
Comparison	OPGP197	7q11.23	7	75212593	75225967	13375	Gain	Yes	-	-
Comparison	OPGP238	7q11.23	7	75600820	75635012	34193	Gain		-	-
Comparison	OPGP241	7q21.11	7	80094674	80114704	20031	Loss		<i>CD36</i>	-
Comparison	OPGP72	7q21.11	7	80094751	80114704	19954	Loss		<i>CD36</i>	-
Comparison	OPGP165	7q21.11	7	82644704	82660873	16170	Gain	Yes	-	-
Comparison	OPGP330	7q21.11	7	83003272	83022856	19585	Gain	Yes	-	-
Comparison	OPGP147	7q21.11	7	85470643	85574947	104305	Loss	Yes	-	-
Comparison	OPGP37	7q21.12	7	87493459	87510328	16870	Loss		-	-
Comparison	OPGP13	7q21.12	7	87495495	87510328	14834	Loss		-	-
Comparison	OPGP178	7q21.12	7	87495495	87510328	14834	Loss		-	-
Comparison	OPGP55	7q21.13	7	89057298	89087497	30200	Gain		-	-
Comparison	OPGP335	7q21.2	7	92318357	92348281	29925	Loss		-	-
Comparison	OPGP172	7q21.3	7	96025677	96047043	21367	Gain	Yes	-	-
Comparison	OPGP343	7q22.1	7	98891250	98975124	83875	Gain	Yes	<i>CPSF4; ATP5J2; ATP5J2-PTCD1; ZNF789; ZNF394; ZKSCAN5</i>	-
Comparison	OPGP356	7q31.1	7	110262044	110357477	95434	Loss	Yes	<i>IMMP2L</i>	-
Comparison	OPGP76	7q31.1	7	110932812	110956463	23652	Loss		<i>IMMP2L</i>	-
Comparison	OPGP185	7q31.1	7	111097030	111140597	43568	Loss	Yes	-	-
Comparison	OPGP106	7q31.31	7	117319061	117373836	54776	Gain	Yes	-	-
Comparison	OPGP44	7q31.31	7	118319397	118350876	31480	Loss		-	-
Comparison	OPGP26	7q31.31	7	118328396	118348981	20586	Loss		-	-
Comparison	OPGP269	7q31.31	7	118639612	118819021	179410	Loss		-	-
Comparison	OPGP362	7q31.31	7	118639612	118819021	179410	Loss		-	-
Comparison	OPGP90	7q31.33	7	125371603	125398077	26475	Gain		-	-
Comparison	OPGP353	7q31.33	7	125371603	125402050	30448	Gain		-	-
Comparison	OPGP306	7q33	7	133428969	133440983	12015	Loss		-	-
Comparison	OPGP15	7q33	7	135811683	135836026	24344	Loss	Yes	-	-
Comparison	OPGP214	7q35	7	143311253	143321679	10427	Loss	Yes	-	-
Comparison	OPGP232	7q35	7	145853216	145885593	32378	Gain		-	-
Comparison	OPGP322	7q35	7	145853798	145885593	31796	Gain		-	-
Comparison	OPGP135	7q36.1	7	151398408	151599221	200814	Gain		<i>GALNT11; KMT2C</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP113	7q36.2	7	152309916	152780053	470138	Gain	Yes	-	-
Comparison	OPGP209	7q36.3	7	158266034	158575189	309156	Gain		<i>ESYT2; WDR60; VIPR2</i>	-
Comparison	OPGP277	7q36.3	7	158700100	158809412	109313	Gain		-	-
Comparison	OPGP252	8p23.3	8	173696	307492	133797	Gain	Yes	<i>ZNF596</i>	-
Comparison	OPGP220	8p23.2	8	2257735	2318174	60440	Loss	Yes	-	-
Comparison	OPGP8	8p23.2	8	2711713	2722424	10712	Loss	Yes	-	-
Comparison	OPGP103	8p23.2	8	3608134	3636999	28866	Loss		-	-
Comparison	OPGP204	8p23.2	8	3608134	3644140	36007	Loss		-	-
Comparison	OPGP138	8p23.2	8	3796276	3811854	15579	Loss		-	-
Comparison	OPGP29	8p23.2	8	4299489	4323910	24422	Loss	Yes	-	-
Comparison	OPGP119	8p23.2	8	4493322	4541100	47779	Loss	Yes	-	-
Comparison	OPGP173	8p23.2	8	4805813	4816996	11184	Loss	Yes	-	-
Comparison	OPGP133	8p23.2	8	4822195	4840333	18139	Loss	Yes	<i>CSMD1</i>	-
Comparison	OPGP5	8p23.2	8	5481630	5523610	41981	Loss	Yes	-	-
Comparison	OPGP141	8p23.2	8	5659866	5680928	21063	Loss	Yes	-	-
Comparison	OPGP92	8p23.2	8	5766175	6015360	249186	Loss	Yes	-	-
Comparison	OPGP59	8p23.2	8	6128679	6145668	16990	Loss		-	-
Comparison	OPGP202	8p23.1,8p23.2	8	6136721	6228295	91575	Loss		-	-
Comparison	OPGP294	8p23.1	8	6220990	6322956	101967	Gain		<i>MCPHI</i>	-
Comparison	OPGP229	8p23.1	8	6222765	6236366	13602	Loss	Yes	-	-
Comparison	OPGP50	8p23.1	8	6639334	7000334	361001	Gain	Yes	<i>XKR5; DEFB1; DEFA6; DEFA4; DEFA1; DEFA1B; DEFA3; DEFA5</i>	-
Comparison	OPGP195	8p23.1	8	8168757	8205884	37128	Loss		-	-
Comparison	OPGP159	8p23.1	8	8375229	8385745	10517	Gain	Yes	-	-
Comparison	OPGP263	8p23.1	8	11018996	11056179	37184	Gain	Yes	-	-
Comparison	OPGP163	8p23.1	8	11783144	11986960	203817	Loss		<i>DEFB136; DEFB135; DEFB134; DEFB130; LOC100133267</i>	-
Comparison	OPGP133	8p22	8	12862253	12888812	26560	Gain		-	-
Comparison	OPGP306	8p22	8	16462741	16577248	114508	Loss		-	-
Comparison	OPGP82	8p22	8	17709875	17754832	44958	Loss	Yes	-	-
Comparison	OPGP64	8p22	8	18707763	18735393	27631	Loss	Yes	<i>PSD3</i>	-
Comparison	OPGP355	8p22	8	18849748	18903101	53354	Loss		-	-
Comparison	OPGP64	8p12	8	32415229	32440158	24930	Gain	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP151	8q11.21	8	48331797	48391592	59796	Gain		<i>KIAA0146</i>	-
Comparison	OPGP245	8q11.21	8	48337198	48467466	130269	Gain	Yes	<i>KIAA0146</i>	-
Comparison	OPGP201	8q11.21	8	50255830	50346706	90877	Gain	Yes	-	-
Comparison	OPGP125	8q11.23	8	53163983	53200562	36580	Loss	Yes	<i>ST18</i>	-
Comparison	OPGP69	8q12.1	8	55846938	56174269	327332	Loss	Yes	-	-
Comparison	OPGP215	8q12.3	8	62544158	62564548	20391	Gain		-	-
Comparison	OPGP213	8q12.3	8	65409538	65420057	10520	Loss		-	-
Comparison	OPGP127	8q13.1	8	67952366	67983383	31018	Loss	Yes	<i>MCMDC2</i>	-
Comparison	OPGP49	8q13.2	8	68188369	68324256	135888	Gain	Yes	<i>CSPP1; ARFGEF1</i>	-
Comparison	OPGP32	8q13.2	8	69891186	69977415	86230	Gain		<i>C8orf34</i>	-
Comparison	OPGP256	8q21.3	8	88226672	88249601	22930	Loss	Yes	-	-
Comparison	OPGP244	8q21.3	8	90540918	90857097	316180	Gain	Yes	<i>RIPK2</i>	-
Comparison	OPGP337	8q21.3	8	90906777	90923153	16377	Loss	Yes	-	-
Comparison	OPGP274	8q21.3	8	92188183	92253014	64832	Loss		<i>LRRC69</i>	-
Comparison	OPGP352	8q22.1	8	95811805	95848084	36280	Loss	Yes	<i>DPY19L4</i>	-
Comparison	OPGP359	8q22.3,8q23.1	8	106053559	106172202	118644	Loss	Yes	-	-
Comparison	OPGP195	8q22.3,8q23.1	8	106057535	106115416	57882	Gain	Yes	-	-
Comparison	OPGP17	8q23.3	8	115329458	115344977	15520	Loss		-	-
Comparison	OPGP282	8q23.3	8	115818013	115979174	161162	Loss	Yes	-	-
Comparison	OPGP91	8q24.11	8	118987651	118998009	10359	Loss	Yes	-	-
Comparison	OPGP5	8q24.12	8	121483185	121517071	33887	Loss	Yes	<i>MRPL13</i>	-
Comparison	OPGP208	8q24.13	8	126139466	126192164	52699	Loss	Yes	<i>KIAA0196; NSMCE2</i>	-
Comparison	OPGP283	8q24.21	8	127720085	127732229	12145	Loss	Yes	-	-
Comparison	OPGP98	8q24.21	8	128699305	128737551	38247	Loss	Yes	-	-
Comparison	OPGP319	8q24.21	8	130932838	131191826	258989	Gain		<i>FAM49B; ASAP1</i>	hsa-miR-5194
Comparison	OPGP316	8q24.3	8	143368085	143455401	87317	Gain	Yes	<i>TSNARE1</i>	-
Comparison	OPGP147	9p24.3	9	324524	360439	35916	Loss	Yes	<i>DOCK8</i>	-
Comparison	OPGP110	9p24.3	9	407448	612360	204913	Gain		<i>DOCK8</i>	-
Comparison	OPGP27	9p24.3	9	500700	521826	21127	Loss		-	-
Comparison	OPGP147	9p24.3	9	515764	816427	300664	Gain		<i>KANK1</i>	-
Comparison	OPGP360	9p24.3	9	551382	789644	238263	Gain	Yes	<i>KANK1</i>	-
Comparison	OPGP60	9p24.3	9	1267906	1288566	20661	Gain	Yes	-	-
Comparison	OPGP354	9p24.3	9	1486230	1568049	81820	Loss		-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP16	9p24.3	9	1490329	1504391	14063	Loss	-	-	-
Comparison	OPGP344	9p24.3	9	1490329	1504391	14063	Loss	-	-	-
Comparison	OPGP111	9p24.2	9	2278588	2342431	63844	Loss	Yes	-	-
Comparison	OPGP140	9p24.1	9	5375779	5388011	12233	Loss	-	-	-
Comparison	OPGP213	9p24.1	9	6614484	6660448	45965	Loss	-	<i>GLDC</i>	-
Comparison	OPGP274	9p24.1	9	7721398	7762912	41515	Loss	-	-	-
Comparison	OPGP344	9p24.1	9	7861163	7922619	61457	Loss	Yes	-	-
Comparison	OPGP210	9p23	9	9324204	9577948	253745	Loss	Yes	-	-
Comparison	OPGP161	9p23	9	9545365	9562879	17515	Gain	Yes	-	-
Comparison	OPGP88	9p23	9	9985482	10028041	42560	Loss	-	-	-
Comparison	OPGP161	9p23	9	10244793	10315264	70472	Gain	Yes	-	-
Comparison	OPGP2	9p23	9	11247448	11266796	19349	Loss	Yes	-	-
Comparison	OPGP213	9p23	9	12902368	12925849	23482	Loss	Yes	-	-
Comparison	OPGP263	9p22.3	9	15844376	15934791	90416	Gain	Yes	<i>CCDC171</i>	-
Comparison	OPGP258	9p22.3	9	15898399	15970320	71922	Loss	Yes	<i>CCDC171</i>	-
Comparison	OPGP143	9p22.2	9	18172087	18238172	66086	Loss	Yes	-	-
Comparison	OPGP21	9p22.1	9	19275457	19320042	44586	Loss	Yes	<i>DENND4C</i>	-
Comparison	OPGP167	9p21.3	9	20599706	20629298	29593	Gain	Yes	<i>MLLT3</i>	-
Comparison	OPGP122	9p21.3	9	22499340	22555485	56146	Loss	Yes	-	-
Comparison	OPGP133	9p21.3	9	22679215	22742395	63181	Loss	Yes	-	-
Comparison	OPGP62	9p21.3	9	23068341	23084676	16336	Loss	-	-	-
Comparison	OPGP120	9p21.2	9	27317823	27366422	48600	Gain	Yes	<i>MOB3B</i>	-
Comparison	OPGP363	9p21.1	9	30548753	30733422	184670	Loss	-	-	-
Comparison	OPGP84	9p21.1	9	32621821	32700249	78429	Gain	Yes	<i>TAFIL</i>	-
Comparison	OPGP268	9p11.2	9	44054868	44183429	128562	Loss	-	-	-
Comparison	OPGP231	9q12	9	66324679	67489865	1165187	Loss	-	-	-
Comparison	OPGP287	9q21.11	9	70769646	71032843	263198	Gain	-	<i>PIP5K1B; PRKACG; FXN; TJP2</i>	-
Comparison	OPGP239	9q21.13	9	73309592	73481836	172245	Gain	Yes	-	-
Comparison	OPGP180	9q21.13	9	77174742	77230547	55806	Gain	Yes	-	-
Comparison	OPGP246	9q21.33	9	86876079	86901212	25134	Gain	Yes	-	-
Comparison	OPGP143	9q22.31	9	93327123	93377810	50688	Gain	Yes	-	-
Comparison	OPGP143	9q22.31	9	93454057	93567716	113660	Gain	Yes	<i>ROR2</i>	-
Comparison	OPGP75	9q22.31	9	93470353	93484097	13745	Gain	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP269	9q22.32	9	96532816	96545429	12614	Loss	Yes	-	-
Comparison	OPGP177	9q31.1	9	103977934	104019392	41459	Loss	-	-	-
Comparison	OPGP195	9q31.1	9	103977934	104019392	41459	Loss	-	-	-
Comparison	OPGP81	9q31.1	9	104241445	104276991	35547	Loss	-	-	-
Comparison	OPGP281	9q31.1	9	104300323	104350673	50351	Loss	Yes	-	-
Comparison	OPGP170	9q31.1	9	104803239	104846815	43577	Loss	-	<i>CYLC2</i>	-
Comparison	OPGP238	9q31.1	9	105438547	105465488	26942	Loss	Yes	-	-
Comparison	OPGP293	9q33.1	9	121280124	121301012	20889	Loss	Yes	-	-
Comparison	OPGP120	9q34.12	9	132673269	132690607	17339	Loss	-	-	-
Comparison	OPGP363	9q34.13	9	133789187	133819010	29824	Loss	Yes	<i>MED27</i>	-
Comparison	OPGP316	9q34.3	9	136734887	136764182	29296	Gain	Yes	<i>COL5A1</i>	-
Comparison	OPGP227	9q34.3	9	138501746	138672282	170537	Gain	Yes	<i>NOTCH1</i>	hsa-miR-4673; hsa-miR-4674
Comparison	OPGP350	9q34.3	9	140130278	140211215	80938	Gain	-	<i>CACNA1B</i>	-
Comparison	OPGP60	9q34.3	9	140138244	140211215	72972	Gain	-	-	-
Comparison	OPGP42	10p15.3	10	1982646	2085776	103131	Gain	Yes	-	-
Comparison	OPGP301	10p15.3	10	2610938	2625988	15051	Loss	Yes	-	-
Comparison	OPGP103	10p15.1	10	4934031	5023303	89273	Loss	-	<i>AKR1C1; AKR1C2</i>	-
Comparison	OPGP236	10p14	10	6710753	6878948	168196	Gain	-	-	-
Comparison	OPGP293	10p14	10	7602955	7621471	18517	Loss	Yes	-	-
Comparison	OPGP309	10p14	10	7672510	7684255	11746	Loss	Yes	-	-
Comparison	OPGP321	10p12.33	10	17349910	17530579	180670	Loss	Yes	<i>ST8SIA6</i>	-
Comparison	OPGP365	10p12.31	10	20902433	21064339	161907	Gain	Yes	-	-
Comparison	OPGP18	10p11.21	10	34924387	34966167	41781	Loss	-	-	-
Comparison	OPGP198	10p11.21	10	34924387	34966167	41781	Loss	-	-	-
Comparison	OPGP237	10p11.21	10	35200211	35348514	148304	Gain	Yes	<i>CUL2</i>	-
Comparison	OPGP293	10p11.21	10	35565000	35647246	82247	Gain	Yes	-	-
Comparison	OPGP161	10p11.21, 10p11.1	10	38330579	39053715	723137	Gain	-	<i>ZNF33A; ZNF37A</i> <i>TMEM72; RASSF4; C10orf10; C10orf25;</i> <i>ZNF22</i>	-
Comparison	OPGP210	10q11.21	10	44739339	44868035	128697	Gain	Yes	<i>ZNF22</i>	-
Comparison	OPGP163	10q11.22	10	47016329	47058971	42643	Gain	-	-	-
Comparison	OPGP136	10q11.22	10	47136186	47213522	77337	Gain	-	-	-
Comparison	OPGP90	10q21.1	10	54191096	54201691	10596	Loss	-	<i>MBL2</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP117	10q21.1	10	54348119	54363972	15854	Gain	-		-
Comparison	OPGP272	10q21.1	10	55882676	55902378	19703	Gain	Yes		-
Comparison	OPGP205	10q21.1	10	56979431	57003485	24055	Gain	Yes		-
Comparison	OPGP316	10q21.1	10	58880511	58914629	34119	Loss	Yes		-
Comparison	OPGP310	10q21.3	10	67969885	67987833	17949	Loss	-		-
Comparison	OPGP334	10q22.2	10	75669152	75930726	261575	Loss	Yes	<i>ADK</i>	-
Comparison	OPGP370	10q23.31	10	92141441	92324568	183128	Loss	-		-
Comparison	OPGP329	10q24.1	10	98269043	98460286	191244	Gain	Yes	<i>TM9SF3; PIK3AP1</i>	-
Comparison	OPGP33	10q24.32	10	103278255	103313556	35302	Gain	-	<i>BTRC</i>	-
Comparison	OPGP215	10q24.33	10	105148048	105303220	155173	Gain	Yes	<i>PDCD11; CALHM2; CALHM1; CALHM3; NEURL</i>	-
Comparison	OPGP141	10q24.33	10	105161626	105197652	36027	Gain	-	<i>PDCD11; CALHM2</i>	-
Comparison	OPGP47	10q25.1	10	109173710	109184496	10787	Loss	-		-
Comparison	OPGP62	10q25.1	10	109173710	109184863	11154	Loss	-		-
Comparison	OPGP361	10q25.3	10	117248910	117305474	56565	Loss	Yes	<i>ATRNL1</i>	-
Comparison	OPGP110	10q26.12	10	122419759	122459873	40115	Gain	Yes		-
Comparison	OPGP225	10q26.3	10	130363010	131616730	1253721	Gain	Yes	<i>MGMT; EBF3</i>	hsa-miR-4297
Comparison	OPGP148	10q26.3	10	130941167	130961684	20518	Gain	Yes		-
Comparison	OPGP45	10q26.3	10	133999987	134027438	27452	Gain	Yes	<i>LRRC27</i>	-
Comparison	OPGP210	10q26.3	10	134005903	134054275	48373	Gain	Yes	<i>LRRC27</i>	-
Comparison	OPGP246	11p15.4	11	4293106	4346177	53072	Gain	-	<i>OR52B4</i>	-
Comparison	OPGP7	11p15.4	11	4762510	4868483	105974	Loss	-	<i>OR52R1; OR51F2; OR51S1; OR51T1</i>	-
Comparison	OPGP184	11p15.4	11	9779172	9845638	66467	Loss	Yes	<i>SBF2</i>	-
Comparison	OPGP208	11p15.3	11	11505249	11516232	10984	Gain	Yes		-
Comparison	OPGP67	11p15.1	11	21471167	21527034	55868	Loss	Yes	<i>NELL1</i>	-
Comparison	OPGP245	11p14.3	11	22178229	22215184	36956	Gain	-	<i>ANO5</i>	-
Comparison	OPGP260	11p14.3	11	23772032	23809934	37903	Gain	Yes		-
Comparison	OPGP57	11p14.3	11	25815436	25875452	60017	Gain	-		-
Comparison	OPGP48	11p14.1	11	30029067	30059899	30833	Gain	Yes		-
Comparison	OPGP230	11p14.1	11	30708854	30720172	11319	Loss	Yes		-
Comparison	OPGP235	11p13	11	31226693	31282996	56304	Loss	Yes	<i>DCDC1</i>	-
Comparison	OPGP247	11p13	11	36351090	36373228	22139	Gain	Yes	<i>PRR5L</i>	-
Comparison	OPGP305	11p12	11	36512834	36529598	16765	Loss	Yes		-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP361	11p12	11	40497095	40547130	50036	Loss	Yes	-	-
Comparison	OPGP352	11p12	11	42243624	42283729	40106	Loss	-	-	-
Comparison	OPGP79	11p12, 11p11.2	11	43385497	43408695	23199	Gain	Yes	<i>TTC17</i>	-
Comparison	OPGP72	11p11.12	11	50050824	50088001	37178	Gain	-	-	-
Comparison	OPGP72	11p11.12	11	50300418	50375651	75234	Gain	-	-	-
Comparison	OPGP276	11p11.12	11	50374125	50707934	333810	Gain	-	-	-
Comparison	OPGP72	11p11.12	11	50402842	50725893	323052	Gain	-	-	-
Comparison	OPGP354	11p11.12	11	51061717	51209565	147849	Gain	-	-	-
Comparison	OPGP142	11q11	11	54514520	55119916	605397	Gain	-	<i>TRIM48; OR4A16; OR4A15; OR4C15; OR4C16</i>	-
Comparison	OPGP103	11q11	11	55119916	55130607	10692	Loss	-	<i>OR4C11</i>	-
Comparison	OPGP142	11q11	11	55217259	55580468	363210	Gain	-	<i>OR5D13; OR5D14; OR5L1; OR5D18; OR5L2; OR5D16; TRIM51; OR5W2; OR5I1; OR10AG1; OR5F1; OR5AS1</i>	-
Comparison	OPGP216	11q11	11	55534978	55803476	268499	Loss	Yes	<i>OR5AS1; OR8I2; OR8H2; OR8H3; OR8J3; OR8K5; OR5J2; OR5T2; OR5T3; OR5T1</i>	-
Comparison	OPGP142	11q11	11	55612642	55665287	52646	Gain	Yes	<i>OR8I2; OR8H2; OR8H3; OR8J3</i>	-
Comparison	OPGP142	11q11	11	55675275	55817112	141838	Loss	Yes	<i>OR8K5; OR5J2; OR5T2; OR5T3; OR5T1; OR8H1</i>	-
Comparison	OPGP68	11q13.2	11	68480846	68493638	12793	Loss	Yes	-	-
Comparison	OPGP232	11q14.1	11	79787170	79797431	10262	Loss	Yes	-	-
Comparison	OPGP198	11q14.1	11	80740796	80869319	128524	Loss	Yes	-	-
Comparison	OPGP190	11q14.1	11	81148189	81273174	124986	Loss	-	-	-
Comparison	OPGP96	11q14.1	11	81544396	81558237	13842	Gain	Yes	-	-
Comparison	OPGP106	11q14.1	11	82267274	82383896	116623	Gain	Yes	<i>PRCP; C11orf82; RAB30</i>	-
Comparison	OPGP206	11q14.1	11	84214283	84247827	33545	Loss	-	-	-
Comparison	OPGP356	11q14.1	11	85111335	85153088	41754	Loss	-	<i>SYTL2</i>	-
Comparison	OPGP310	11q14.2	11	86990429	87033092	42664	Loss	Yes	-	-
Comparison	OPGP102	11q14.3	11	89457958	89787171	329214	Loss	Yes	<i>UBTF1; NAALAD2; CHORDC1</i>	-
Comparison	OPGP298	11q14.3	11	89791938	89890660	98723	Loss	Yes	-	-
Comparison	OPGP194	11q14.3	11	91198725	92219783	1021059	Gain	Yes	<i>FAT3</i>	-
Comparison	OPGP1	11q22.1	11	101399150	101492312	93163	Gain	Yes	<i>C11orf70; YAPI</i>	-
Comparison	OPGP336	11q22.3	11	102848464	102885522	37059	Gain	-	<i>DYNC2H1</i>	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP64	11q23.1	11	111549205	111592334	43130	Loss	Yes	<i>BCO2</i>	-
Comparison	OPGP179	11q23.1	11	111844695	111890870	46176	Loss		-	-
Comparison	OPGP367	11q23.3	11	117873790	117930629	56840	Gain	Yes	<i>KMT2A; TTC36; TMEM25; IFT46</i>	-
Comparison	OPGP307	11q25	11	133849852	133863806	13955	Loss		-	-
Comparison	OPGP270	11q25	11	134352738	134449982	97245	Loss	Yes	-	-
Comparison	OPGP317	12p13.33	12	30887	104526	73640	Loss	Yes	<i>IQSEC3</i>	-
Comparison	OPGP22	12p13.32	12	5106123	5264317	158195	Loss		-	-
Comparison	OPGP35	12p13.31	12	5577633	6102612	524980	Loss	Yes	<i>ANO2; VWF</i>	-
Comparison	OPGP195	12p13.31	12	9344838	9387669	42832	Gain	Yes	-	-
Comparison	OPGP150	12p12.1	12	21445967	21469538	23572	Gain		-	-
Comparison	OPGP35	12p11.22	12	29097338	29113119	15782	Gain		-	-
Comparison	OPGP65	12p11.22	12	30282738	30302354	19617	Gain		-	-
Comparison	OPGP353	12p11.21	12	30841413	31092984	251572	Gain	Yes	<i>TSPAN11</i>	-
Comparison	OPGP158	12p11.21	12	32308006	32333520	25515	Gain	Yes	-	-
Comparison	OPGP269	12p11.21	12	32448256	32508065	59810	Loss	Yes	-	-
Comparison	OPGP128	12q11	12	36340414	36394320	53907	Loss		-	-
Comparison	OPGP64	12q12	12	40300400	40362608	62209	Gain	Yes	-	-
Comparison	OPGP268	12q13.13	12	50799017	50846239	47223	Gain	Yes	-	-
Comparison	OPGP112	12q15	12	67739183	67750568	11386	Loss	Yes	-	-
Comparison	OPGP122	12q21.1	12	71730857	71783326	52470	Loss	Yes	-	-
Comparison	OPGP191	12q21.1	12	72084450	72104775	20326	Loss		-	-
Comparison	OPGP285	12q21.1	12	72593059	72710188	117130	Loss		-	-
Comparison	OPGP57	12q21.1	12	72595814	72710188	114375	Loss		-	-
Comparison	OPGP153	12q21.1	12	72595814	72710188	114375	Loss		-	-
Comparison	OPGP126	12q21.2	12	74329241	74480712	151472	Gain	Yes	-	-
Comparison	OPGP97	12q21.31	12	79156468	79255527	99060	Loss	Yes	<i>OTOGL</i>	-
Comparison	OPGP366	12q21.31	12	82994027	83226213	232187	Gain		-	-
Comparison	OPGP195	12q21.31	12	84430223	84569268	139046	Loss		-	-
Comparison	OPGP201	12q21.31	12	84541750	84602292	60543	Loss		-	-
Comparison	OPGP10	12q22	12	91644061	91845235	201175	Gain	Yes	<i>PLEKHG7; EEAI</i>	-
Comparison	OPGP361	12q22	12	91644061	91848534	204474	Gain	Yes	<i>PLEKHG7; EEAI</i>	-
Comparison	OPGP132	12q23.3	12	103201466	103224839	23374	Loss	Yes	<i>TXNRD1; EID3</i>	-
Comparison	OPGP16	12q24.23	12	117963429	117983724	20296	Loss		-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP352	12q24.32	12	125549861	125570543	20683	Loss	-		-
Comparison	OPGP319	12q24.32	12	125576252	125745397	169146	Gain	Yes		-
Comparison	OPGP16	12q24.32	12	127728669	127939053	210385	Gain	Yes	<i>TMEM132C; SLC15A4; GLT1D1</i>	-
Comparison	OPGP19	12q24.33	12	129278320	129772780	494461	Gain	Yes	<i>PIWIL1; RIMBP2</i>	-
Comparison	OPGP1	12q24.33	12	130040458	130382165	341708	Gain	Yes	<i>GPR133</i>	-
Comparison	OPGP147	12q24.33	12	130044192	130307008	262817	Gain	Yes	<i>GPR133</i>	-
Comparison	OPGP147	12q24.33	12	130524700	130674102	149403	Gain	Yes	-	-
Comparison	OPGP1	12q24.33	12	130528580	130674102	145523	Gain	Yes	-	-
Comparison	OPGP86	13q12.11	13	19126655	19225716	99062	Gain	Yes	<i>MPHOSPH8; PSPC1</i>	-
Comparison	OPGP175	13q12.12	13	22404072	23834987	1430916	Loss		<i>SGCG; SACS; TNFRSF19; MIPEP; CIQTNF9B; CIQTNF9B-AS1; SPATA13; CIQTNF9</i>	hsa-miR-2276-3p; hsa-miR-2276-5p
Comparison	OPGP156	13q12.12	13	24170898	24227677	56780	Gain		<i>ATP12A</i>	-
Comparison	OPGP272	13q12.12	13	24170898	24231779	60882	Gain		<i>ATP12A</i>	-
Comparison	OPGP228	13q12.13	13	25189176	25266951	77776	Gain	Yes	<i>ATP8A2</i>	-
Comparison	OPGP244	13q13.2	13	34433238	34464233	30996	Loss	Yes	-	-
Comparison	OPGP189	13q14.11	13	39533644	39545764	12121	Loss	Yes	-	-
Comparison	OPGP264	13q14.11	13	40307515	40374086	66572	Loss	Yes	-	-
Comparison	OPGP58	13q14.3	13	49492414	50352208	859795	Loss		<i>KCNRG; DLEU7</i>	hsa-miR-16-5p; hsa-miR-16-1-3p; hsa-miR-15a-5p; hsa-miR-15a-3p
Comparison	OPGP101	13q21.1	13	54041427	54374043	332617	Loss	Yes	-	-
Comparison	OPGP280	13q21.1	13	55876886	55906043	29158	Loss	Yes	-	-
Comparison	OPGP276	13q21.1	13	56786597	56943790	157194	Gain	Yes	-	-
Comparison	OPGP71	13q21.31	13	62292555	62322976	30422	Loss	Yes	-	-
Comparison	OPGP59	13q21.32	13	64649291	65321594	672304	Gain	Yes	-	-
Comparison	OPGP255	13q21.33	13	67834884	67858955	24072	Loss		-	-
Comparison	OPGP143	13q21.33	13	71110420	71128782	18363	Loss	Yes	-	-
Comparison	OPGP43	13q31.1	13	79317509	79355699	38191	Gain		-	-
Comparison	OPGP328	13q31.1	13	82086075	82101299	15225	Gain		-	-
Comparison	OPGP159	13q31.1	13	82086779	82101299	14521	Gain		-	-
Comparison	OPGP303	13q31.1	13	83479121	83599230	120110	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP126	13q31.1	13	84707522	84735558	28037	Gain	Yes	-	-
Comparison	OPGP144	13q31.2	13	88056680	88068498	11819	Loss	Yes	-	-
Comparison	OPGP296	13q31.3	13	89780507	89902445	121939	Loss	Yes	-	-
Comparison	OPGP306	13q32.3	13	98598077	98702466	104390	Gain		<i>UBAC2</i>	-
Comparison	OPGP243	13q32.3	13	99921578	100016266	94689	Gain	Yes	<i>PCCA; GGACT</i>	-
Comparison	OPGP164	13q33.2	13	105084157	105146286	62130	Loss		-	-
Comparison	OPGP164	13q33.2	13	105206038	105283311	77274	Gain		-	-
Comparison	OPGP253	13q33.3	13	107130075	107283351	153277	Loss	Yes	-	-
Comparison	OPGP7	13q34	13	109538464	109558627	20164	Loss		-	-
Comparison	OPGP365	13q34	13	113543086	113654849	111764	Gain	Yes	<i>GAS6; TMEM255B</i>	-
Comparison	OPGP211	14q11.2	14	21604830	21656002	51173	Loss		-	-
Comparison	OPGP211	14q11.2	14	21676812	22038836	362025	Loss		-	-
Comparison	OPGP341	14q11.2	14	21683301	22041431	358131	Loss		-	-
Comparison	OPGP95	14q11.2	14	21811905	21929710	117806	Loss		-	-
Comparison	OPGP183	14q11.2	14	21862983	21929710	66728	Loss		-	-
Comparison	OPGP313	14q11.2	14	21867401	22030672	163272	Loss		-	-
Comparison	OPGP40	14q11.2	14	21992078	22048615	56538	Loss	Yes	-	-
Comparison	OPGP95	14q11.2	14	21992078	22025556	33479	Loss	Yes	-	-
Comparison	OPGP179	14q11.2	14	22327900	22352590	24691	Loss		<i>SLC7A7</i>	-
Comparison	OPGP152	14q12	14	26537691	26631461	93771	Loss	Yes	-	-
Comparison	OPGP61	14q12	14	26604502	26663956	59455	Loss		-	-
Comparison	OPGP141	14q12	14	27170503	27376515	206013	Gain	Yes	-	hsa-miR-3171
Comparison	OPGP106	14q12	14	30614595	30736869	122275	Gain	Yes	<i>AP4S1; HECTD1</i>	-
Comparison	OPGP106	14q12	14	31317416	31373117	55702	Loss	Yes	<i>NUBPL</i>	-
Comparison	OPGP340	14q13.1	14	34060194	34097259	37066	Loss	Yes	<i>EAPP</i>	-
Comparison	OPGP80	14q13.3	14	36418753	36428789	10037	Gain		-	-
Comparison	OPGP309	14q21.1	14	38727298	38881982	154685	Gain	Yes	<i>MIA2; CTAGE5</i>	-
Comparison	OPGP202	14q21.1	14	40034310	40114168	79859	Loss	Yes	-	-
Comparison	OPGP363	14q21.2, 14q21.1	14	40885215	41054586	169372	Loss		-	-
Comparison	OPGP277	14q21.3	14	44998959	45027364	28406	Loss	Yes	-	-
Comparison	OPGP299	14q21.3	14	45451570	45482761	31192	Gain	Yes	-	-
Comparison	OPGP157	14q21.3	14	46165038	46175925	10888	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP221	14q22.1	14	49033143	49087041	53899	Loss	Yes	-	-
Comparison	OPGP289	14q22.1	14	50085600	50246752	161153	Loss	Yes	<i>ATL1; SAV1</i>	-
Comparison	OPGP9	14q22.2	14	54205175	54227726	22552	Gain	Yes	-	-
Comparison	OPGP162	14q23.2	14	62587454	62624470	37017	Gain	Yes	-	-
Comparison	OPGP195	14q23.3	14	66262441	66299550	37110	Loss	Yes	-	-
Comparison	OPGP264	14q23.3	14	66605185	66719847	114663	Gain	Yes	<i>GPHN</i>	-
Comparison	OPGP291	14q24.2	14	69969832	70009883	40052	Loss	Yes	<i>ADAM21</i>	-
Comparison	OPGP278	14q24.2	14	70023902	70083000	59099	Gain	Yes	<i>ADAM20</i>	-
Comparison	OPGP201	14q31.1	14	79540616	79556292	15677	Loss	Yes	-	-
Comparison	OPGP60	14q31.3	14	85617792	85641263	23472	Loss	-	-	-
Comparison	OPGP221	14q31.3	14	86710968	86769895	58928	Loss	Yes	-	-
Comparison	OPGP96	14q32.2	14	99426385	99465902	39518	Gain	Yes	<i>EML1</i>	-
Comparison	OPGP40	14q32.33	14	105265522	105366813	101292	Loss	-	-	-
Comparison	OPGP45	14q32.33	14	105265522	105391431	125910	Loss	-	-	-
Comparison	OPGP118	14q32.33	14	105265522	105391431	125910	Loss	-	-	-
Comparison	OPGP121	14q32.33	14	105265522	105391431	125910	Loss	-	-	-
Comparison	OPGP220	14q32.33	14	105265522	105391431	125910	Loss	-	-	-
Comparison	OPGP299	14q32.33	14	105265522	105391431	125910	Loss	-	-	-
Comparison	OPGP371	14q32.33	14	105265522	105391431	125910	Loss	-	-	-
Comparison	OPGP2	14q32.33	14	105289630	105391431	101802	Loss	-	-	-
Comparison	OPGP264	14q32.33	14	105289630	105391431	101802	Loss	-	-	-
Comparison	OPGP44	14q32.33	14	105295399	105391431	96033	Loss	-	-	-
Comparison	OPGP304	14q32.33	14	105295399	105391431	96033	Loss	-	-	-
Comparison	OPGP58	14q32.33	14	105413362	105562063	148702	Loss	-	-	-
Comparison	OPGP159	14q32.33	14	106216317	106276779	60463	Gain	-	-	-
Comparison	OPGP134	14q32.33	14	106344954	106356482	11529	Gain	Yes	-	-
Comparison	OPGP209	15q11.2	15	20801551	21230587	429037	Loss	-	<i>LOC440243</i>	-
Comparison	OPGP284	15q11.2	15	21851447	21904021	52575	Loss	Yes	-	-
Comparison	OPGP277	15q11.2	15	22643359	22666253	22895	Loss	-	-	-
Comparison	OPGP128	15q11.2	15	22842849	22869179	26331	Gain	-	-	-
Comparison	OPGP316	15q11.2	15	22842849	22886561	43713	Gain	-	-	-
Comparison	OPGP212	15q11.2	15	22968551	22993596	25046	Gain	-	-	-
Comparison	OPGP248	15q11.2	15	22968551	22997449	28899	Gain	-	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP70	15q11.2	15	22971085	23002661	31577	Gain	-	-	-
Comparison	OPGP103	15q11.2	15	22981174	22993596	12423	Gain	-	-	-
Comparison	OPGP69	15q13.3	15	30291556	30318608	27053	Loss	-	-	-
Comparison	OPGP288	15q13.3	15	30291556	30318608	27053	Loss	-	-	-
Comparison	OPGP156	15q14	15	32374931	32421325	46395	Loss	Yes	<i>SLC12A6</i>	-
Comparison	OPGP138	15q14	15	36983956	37176174	192219	Gain	Yes	-	-
Comparison	OPGP210	15q21.1	15	44632396	44745152	112757	Loss	-	-	-
Comparison	OPGP74	15q21.1	15	45962099	45979698	17600	Gain	-	-	-
Comparison	OPGP341	15q21.3	15	53998357	54225066	226710	Gain	Yes	<i>NEDD4; RFX7</i>	-
Comparison	OPGP8	15q22.2	15	59034061	59050669	16609	Loss	Yes	-	-
Comparison	OPGP255	15q23	15	69022959	69224764	201806	Gain	Yes	<i>LRRC49; CT62; THSD4</i>	-
Comparison	OPGP13	15q23	15	69403515	69423875	20361	Loss	-	-	-
Comparison	OPGP342	15q24.3	15	75293482	75356376	62895	Loss	Yes	-	-
Comparison	OPGP147	15q25.1, 15q24.3	15	75819762	76127594	307833	Gain	Yes	<i>TBC1D2B</i>	-
Comparison	OPGP142	15q25.1	15	79154864	79169669	14806	Loss	Yes	-	-
Comparison	OPGP57	15q25.1	15	79334232	79344892	10661	Loss	Yes	<i>IL16</i>	-
Comparison	OPGP214	15q25.2	15	82886489	82982104	95616	Gain	Yes	<i>ZSCAN2</i>	-
Comparison	OPGP242	15q25.3	15	83336499	83496203	159705	Loss	Yes	<i>PDE8A</i>	-
Comparison	OPGP321	15q25.3	15	83688662	83715490	26829	Loss	Yes	-	-
Comparison	OPGP311	15q26.1	15	90565432	90576621	11190	Loss	Yes	-	-
Comparison	OPGP232	15q26.1	15	91740596	91852025	111430	Loss	Yes	-	-
Comparison	OPGP14	15q26.2	15	92825093	92839086	13994	Loss	-	-	-
Comparison	OPGP128	15q26.3	15	97167880	97202432	34553	Loss	Yes	-	-
Comparison	OPGP264	15q26.3	15	97908966	97932653	23688	Loss	Yes	-	-
Comparison	OPGP230	15q26.3	15	98510305	98523873	13569	Loss	Yes	<i>ADAMTS17</i>	-
Comparison	OPGP124	15q26.3	15	98751652	98906792	155141	Gain	Yes	<i>CERS3</i>	-
Comparison	OPGP13	15q26.3	15	99970111	100033288	63178	Loss	Yes	<i>TM2D3; TARSL2</i>	-
Comparison	OPGP37	16p13.3	16	160326	181309	20984	Gain	Yes	<i>HBA2; HBA1; HBQ1; LUC7L</i>	-
Comparison	OPGP99	16p13.3	16	4526971	4589721	62751	Loss	Yes	<i>C16orf96</i>	-
Comparison	OPGP338	16p13.3	16	5403914	5419169	15256	Loss	Yes	-	-
Comparison	OPGP169	16p13.2	16	6565423	6610859	45437	Loss	-	-	-
Comparison	OPGP236	16p13.2	16	6814660	6918847	104188	Loss	-	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP261	16p13.2	16	6856452	7021149	164698	Loss	-		-
Comparison	OPGP194	16p13.2	16	6875284	6927498	52215	Loss	-		-
Comparison	OPGP362	16p13.2	16	6908730	6981470	72741	Loss	-		-
Comparison	OPGP144	16p13.2	16	8527689	8545987	18299	Loss	Yes		-
Comparison	OPGP197	16p13.2	16	8642807	8738327	95521	Gain		<i>METTL22; ABAT</i>	-
Comparison	OPGP226	16p13.13	16	11541247	11558388	17142	Loss	Yes	<i>LITAF</i>	-
Comparison	OPGP198	16p13.12	16	14164051	14189983	25933	Gain	Yes		-
Comparison	OPGP265	16p13.12	16	14446561	14494322	47762	Gain	Yes	<i>PARN</i>	-
Comparison	OPGP157	16p12.3	16	18464221	18540917	76697	Loss		<i>NOMO2</i>	-
Comparison	OPGP341	16p12.3	16	20420282	20453353	33072	Loss	-		-
Comparison	OPGP223	16p12.1, 16p11.2	16	27432463	27651834	219372	Gain		<i>GTF3C1; KIAA0556</i>	-
Comparison	OPGP166	16p11.2	16	32496122	32522419	26298	Gain	-		-
Comparison	OPGP243	16p11.2	16	32496122	32522419	26298	Gain	-		-
Comparison	OPGP247	16p11.2	16	32496122	32522419	26298	Gain	-		-
Comparison	OPGP275	16p11.2	16	32496402	32522407	26006	Gain	-		-
Comparison	OPGP183	16q12.1	16	46980147	47071325	91179	Gain	Yes		-
Comparison	OPGP255	16q12.2	16	54196274	54374206	177933	Gain	Yes	<i>SLC6A2</i>	-
Comparison	OPGP224	16q21	16	61976815	61993809	16995	Loss	Yes		-
Comparison	OPGP150	16q22.3	16	69977549	70012760	35212	Gain	Yes	<i>CALB2</i>	-
Comparison	OPGP329	16q22.3	16	70996201	71100367	104167	Loss	Yes		-
Comparison	OPGP270	16q22.3	16	71116930	71131985	15056	Loss	Yes		-
Comparison	OPGP164	16q23.1	16	74200364	74212427	12064	Loss	Yes	<i>ADATI</i>	-
Comparison	OPGP51	16q23.1	16	74524271	74567316	43046	Loss	Yes		-
Comparison	OPGP104	16q23.1	16	75794611	75834791	40181	Loss		<i>SYCE1L</i>	-
Comparison	OPGP6	16q23.1	16	75804807	75879491	74685	Loss	Yes	<i>ADAMTS18</i>	-
Comparison	OPGP61	16q23.1	16	76602626	76674452	71827	Loss		<i>CLEC3A</i>	-
Comparison	OPGP56	16q23.2	16	79508646	79557426	48781	Loss	Yes		-
Comparison	OPGP64	16q23.3	16	80661587	80676273	14687	Loss	Yes	<i>HSD17B2</i>	-
Comparison	OPGP162	16q23.3	16	81545526	81604208	58683	Loss	Yes		-
Comparison	OPGP56	16q24.1	16	84327816	84349401	21586	Loss	-		hsa-miR-1910-5p; hsa-miR-1910-3p

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP256	16q24.1	16	84802018	84814714	12697	Loss	Yes	-	-
Comparison	OPGP252	16q24.1	16	84837516	84867945	30430	Loss	Yes	-	-
Comparison	OPGP24	16q24.1	16	85030259	85049728	19470	Gain	Yes	-	-
Comparison	OPGP301	16q24.2	16	86322658	86340352	17695	Loss	Yes	<i>KLHDC4</i>	-
Comparison	OPGP177	17p13.3	17	514903	534011	19109	Loss	Yes	-	-
Comparison	OPGP209	17p13.3	17	659882	1055525	395644	Loss	Yes	<i>ABR; NXN; TIMM22</i>	hsa-miR-3183
Comparison	OPGP229	17p13.3	17	681792	731386	49595	Gain		<i>NXN</i>	-
Comparison	OPGP242	17p12	17	13119162	13175561	56400	Gain		-	-
Comparison	OPGP167	17p11.2	17	15810282	16058587	248306	Gain	Yes	<i>ADORA2B; ZSWIM7; TTC19; NCOR1</i>	-
Comparison	OPGP319	17p11.2	17	19911470	19926019	14550	Loss	Yes	-	-
Comparison	OPGP312	17q21.1, 17q12	17	35306091	35439280	133190	Gain	Yes	<i>GSDMB; ORMDL3; LRRC3C; GSDMA; PSMD3; CSF3; MED24</i>	hsa-miR-6884- 5p; hsa-miR- 6884-3p
Comparison	OPGP239	17q21.32	17	42833610	42848983	15374	Loss		<i>EFCAB13</i>	-
Comparison	OPGP227	17q21.33	17	45187116	45212702	25587	Loss	Yes	<i>FAM117A</i>	-
Comparison	OPGP256	17q22	17	47968877	48021056	52180	Loss		-	-
Comparison	OPGP62	17q22	17	49286499	49375343	88845	Loss	Yes	-	-
Comparison	OPGP35	17q22	17	50229035	50249835	20801	Gain	Yes	-	-
Comparison	OPGP134	17q22	17	54590260	54852540	262281	Gain		<i>PRR11; SMG8; GDPD1; YPEL2</i>	hsa-miR-4729
Comparison	OPGP273	17q23.2	17	57877404	57949222	71819	Gain		<i>METTL2A; TLK2</i>	-
Comparison	OPGP293	17q23.3	17	58410367	58446485	36119	Gain		<i>TANC2</i>	-
Comparison	OPGP181	17q23.3	17	59290481	59356661	66181	Loss		<i>CSH2; GH2; CSH1; CSHL1; GH1</i>	-
Comparison	OPGP28	17q24.2	17	61841258	61916742	75485	Loss		-	-
Comparison	OPGP69	17q24.2	17	62816676	62829597	12922	Loss		-	-
Comparison	OPGP343	17q25.1	17	71898039	71934237	36199	Gain	Yes	<i>UBE2O</i>	-
Comparison	OPGP349	18p11.32	18	160441	210599	50159	Gain	Yes	<i>USP14; THOC1</i>	-
Comparison	OPGP318	18p11.32	18	311430	332512	21083	Loss	Yes	<i>COLEC12</i>	-
Comparison	OPGP337	18p11.32	18	378110	723966	345857	Gain		<i>COLEC12; CETN1; CLUL1; TYMS; C18orf56; ENOSF1; YES1</i>	-
Comparison	OPGP234	18p11.31	18	2974448	2988950	14503	Loss	Yes	-	-
Comparison	OPGP302	18p11.31	18	4404354	4641535	237182	Gain	Yes	-	-
Comparison	OPGP279	18p11.23	18	7213705	7427868	214164	Gain	Yes	<i>LRRC30</i>	-
Comparison	OPGP141	18p11.23	18	7997252	8015176	17925	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP276	18p11.21	18	12510514	12523241	12728	Loss	Yes	-	-
Comparison	OPGP202	18q11.1	18	16783351	16878247	94897	Gain	Yes	<i>ROCK1</i>	-
Comparison	OPGP276	18q11.2	18	21754916	21790936	36021	Loss	Yes	-	-
Comparison	OPGP285	18q12.1	18	23510400	23916848	406449	Gain	Yes	<i>CDH2</i>	-
Comparison	OPGP271	18q12.1	18	27991040	28018557	27518	Gain	Yes	-	-
Comparison	OPGP223	18q12.2	18	33521263	33531846	10584	Loss	Yes	-	-
Comparison	OPGP315	18q21.2	18	47146846	47209177	62332	Gain	Yes	-	-
Comparison	OPGP132	18q21.2	18	49439197	49450886	11690	Loss	-	-	-
Comparison	OPGP254	18q21.2	18	49439197	49450886	11690	Loss	-	-	-
Comparison	OPGP167	18q21.31	18	53047911	53074975	27065	Loss	Yes	-	-
Comparison	OPGP114	18q22.1	18	60268246	60425300	157055	Gain	-	-	-
Comparison	OPGP25	18q22.1	18	60276090	60420251	144162	Gain	-	-	-
Comparison	OPGP104	18q22.2	18	65832070	66021008	188939	Loss	Yes	<i>RTTN</i>	-
Comparison	OPGP112	18q22.3	18	69281483	69311825	30343	Loss	Yes	-	-
Comparison	OPGP183	18q23	18	72565690	72600290	34601	Loss	Yes	-	-
Comparison	OPGP303	18q23	18	73453193	73510172	56980	Loss	Yes	-	-
Comparison	OPGP121	19p13.3	19	2356116	2367945	11830	Loss	-	<i>TMPRSS9</i>	-
Comparison	OPGP171	19p13.11	19	18622276	18653925	31650	Gain	Yes	<i>KLHL26</i>	-
Comparison	OPGP52	19p12	19	20133203	20162646	29444	Gain	Yes	<i>ZNF486</i>	-
Comparison	OPGP93	19p12	19	23781659	23892043	110385	Gain	Yes	<i>ZNF726</i>	-
Comparison	OPGP184	19q12	19	33790946	33816349	25404	Loss	Yes	-	-
Comparison	OPGP365	19q12	19	34619105	34690833	71729	Gain	Yes	-	-
Comparison	OPGP228	19q13.2, 19q13.31	19	47781613	47867134	85522	Loss	Yes	<i>CEACAM8</i>	-
Comparison	OPGP209	19q13.31	19	48281291	48381390	100100	Loss	-	<i>PSG5</i>	-
Comparison	OPGP27	19q13.33	19	55816543	55888141	71599	Gain	Yes	<i>SYT3; C19orf81; SHANK1</i>	-
Comparison	OPGP264	19q13.33	19	56834164	56846717	12554	Loss	-	<i>SIGLEC14</i>	-
Comparison	OPGP326	19q13.33	19	56834164	56846717	12554	Loss	-	<i>SIGLEC14</i>	-
Comparison	OPGP276	19q13.41	19	58291334	58320465	29132	Gain	-	<i>ZNF415</i>	-
Comparison	OPGP123	19q13.41	19	58556242	58588445	32204	Gain	Yes	-	-
Comparison	OPGP149	19q13.42	19	59520820	59545647	24828	Loss	Yes	<i>LILRA4</i>	-
Comparison	OPGP99	19q13.42	19	59795415	59809329	13915	Loss	-	<i>LILRA1</i>	-
Comparison	OPGP357	19q13.42	19	59843208	59868103	24896	Gain	-	<i>LILRB4</i>	hsa-miR-8061

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP10	19q13.42	19	60695892	60726887	30996	Gain		<i>SSC5D</i>	-
Comparison	OPGP213	19q13.43	19	62159732	62171294	11563	Loss		-	-
Comparison	OPGP292	19q13.43	19	62822038	62850702	28665	Gain		<i>ZNF134; ZNF211</i>	-
Comparison	OPGP252	20p13	20	808802	1099029	290228	Gain	Yes	<i>PSMF1; ANGPT4; RSPO4</i>	-
Comparison	OPGP150	20p12.3	20	5882566	5998478	115913	Gain	Yes	<i>MCM8; CRLS1; LRRN4</i>	-
Comparison	OPGP82	20p12.3	20	6096050	6112780	16731	Loss	Yes	-	-
Comparison	OPGP308	20p12.3	20	6359203	6369380	10178	Gain	Yes	-	-
Comparison	OPGP207	20p12.3	20	7588629	7618194	29566	Loss	Yes	-	-
Comparison	OPGP73	20p12.3	20	8354002	8364213	10212	Loss	Yes	-	-
Comparison	OPGP122	20p12.3	20	8583927	8850689	266763	Gain	Yes	<i>PLCB1</i>	-
Comparison	OPGP286	20p12.1	20	14810804	14824100	13297	Loss		-	-
Comparison	OPGP369	20p12.1	20	14985034	15005685	20652	Loss		-	-
Comparison	OPGP186	20p12.1	20	15215722	15250374	34653	Gain		-	-
Comparison	OPGP170	20p11.21	20	23193270	23220469	27200	Gain	Yes	-	-
Comparison	OPGP10	20p11.21	20	25116159	25150508	34350	Loss	Yes	<i>ENTPD6</i>	-
Comparison	OPGP133	20p11.1, 20p11.21	20	25622050	25758321	136272	Gain		- <i>DEFB115; DEFB116; DEFB118; DEFB119; DEFB121; DEFB123; DEFB124; REM1; HMI3</i>	-
Comparison	OPGP43	20q11.21	20	29298710	29570401	271692	Gain		<i>DEFB115; DEFB116; DEFB118; DEFB119</i>	-
Comparison	OPGP325	20q11.21	20	29298710	29446231	147522	Gain	Yes	<i>DEFB115; DEFB116; DEFB118; DEFB119</i>	-
Comparison	OPGP364	20q11.21	20	29334284	29359773	25490	Loss	Yes	<i>DEFB116</i>	-
Comparison	OPGP232	20q13.12	20	42279080	42296207	17128	Loss	Yes	-	-
Comparison	OPGP208	20q13.12	20	44909981	44920224	10244	Loss	Yes	-	-
Comparison	OPGP50	20q13.13	20	47584756	47610582	25827	Loss		<i>PTGIS</i>	-
Comparison	OPGP79	20q13.13	20	48265623	48284599	18977	Gain	Yes	-	-
Comparison	OPGP36	20q13.31	20	54839918	54867252	27335	Loss		-	-
Comparison	OPGP132	20q13.31	20	54839918	54860758	20841	Loss		-	-
Comparison	OPGP213	21q21.1	21	17738094	18003248	265155	Gain	Yes	<i>CXADR; BTG3</i>	-
Comparison	OPGP97	21q21.1	21	20190121	20374791	184671	Loss	Yes	-	-
Comparison	OPGP159	21q21.1	21	21493932	21545328	51397	Loss	Yes	-	-
Comparison	OPGP41	21q21.1	21	22534973	22573005	38033	Loss	Yes	-	-
Comparison	OPGP115	21q21.2	21	23169797	23220091	50295	Loss	Yes	-	-

Sample Status	SampleID	Cytoband	Chr	Start	End	Size (bp)	Gain/ Loss	Very Rare	Protein-coding Genes in CNV	miRNAs in CNV
Comparison	OPGP39	21q21.2	21	23196562	23232190	35629	Loss	Yes	-	-
Comparison	OPGP301	21q22.11	21	34230168	34268175	38008	Loss	Yes	-	-
Comparison	OPGP91	21q22.13	21	37320548	37401155	80608	Gain	Yes	<i>PIGP; TTC3</i>	-
Comparison	OPGP207	21q22.3	21	43014698	43025706	11009	Gain	Yes	<i>PDE9A</i>	-
Comparison	OPGP158	21q22.3	21	45914903	45999580	84678	Loss		-	-
Comparison	OPGP202	22q11.1	22	15244898	15380277	135380	Gain		-	-
Comparison	OPGP297	22q11.21	22	16783629	16875947	92319	Gain	Yes	-	hsa-miR-648
Comparison	OPGP268	22q11.21	22	17386126	17410722	24597	Gain		<i>DGCR2</i>	-
Comparison	OPGP204	22q11.21	22	18138816	18251778	112963	Loss	Yes	<i>TBX1; GNB1L; C22orf29; TXNRD2</i>	-
Comparison	OPGP58	22q11.22	22	21279648	21553233	273586	Loss		<i>GGTLC2</i>	hsa-miR-650
Comparison	OPGP199	22q11.23	22	22475809	22613015	137207	Gain	Yes	<i>SMARCB1; DERL3; SLC2A11; MIF</i>	-
Comparison	OPGP216	22q11.23	22	22501305	22601745	100441	Gain	Yes	<i>SMARCB1; DERL3; SLC2A11; MIF</i>	-
Comparison	OPGP98	22q12.2	22	28616197	28678686	62490	Loss	Yes	-	-
Comparison	OPGP353	22q12.2	22	28660459	28691881	31423	Loss		-	-
Comparison	OPGP88	22q12.2	22	30259132	30274347	15216	Loss	Yes	<i>SFII</i>	-
Comparison	OPGP344	22q12.3	22	30689003	30794362	105360	Gain	Yes	<i>SLC5A1</i>	-
Comparison	OPGP111	22q12.3	22	30798490	30856639	58150	Gain	Yes	<i>SLC5A1</i>	-
Comparison	OPGP111	22q12.3	22	30889295	31109924	220630	Gain		<i>RFPL2; SLC5A4; RFPL3</i>	-
Comparison	OPGP60	22q12.3	22	34879640	34900774	21135	Gain	Yes	<i>APOL3</i>	-
Comparison	OPGP288	22q12.3	22	35500861	35512627	11767	Loss	Yes	<i>IFT27</i>	-
Comparison	OPGP324	22q13.31	22	46835442	46857005	21564	Gain	Yes	-	-
Comparison	OPGP355	22q13.32	22	47529950	47981564	451615	Gain	Yes	<i>FAM19A5</i>	hsa-miR-4535
Comparison	OPGP249	22q13.32	22	47653943	47733961	80019	Gain	Yes	-	-
Comparison	OPGP249	22q13.32, 22q13.33	22	48117741	48471735	353995	Gain		-	hsa-miR-3667- 5p; hsa-miR- 3667-3p

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