

**inv(16)(p12.2)**

- inversion on Chr16: 21502978(p12.2) - 22436123(p12.2)
- all genes near breakpoints: ['POLR3K', 'CRYM', 'MIR3680-1', 'OTOAP1', 'METTL9', 'MIR6859-4', 'MIR6859-1', 'HBM', 'LOC440346', 'CDR2', 'NPIPB5', 'POLR3E', 'HBQ1', 'MFSD13B', 'SMG1P1', 'HBA1', 'HBA2', 'WASIR2', 'RHBDF1', 'SMG1P3', 'NPRL3', 'HBZ', 'CRYM-AS1', 'LUC7L', 'SNRNP25', 'EEF2K', 'IGSF6', 'MPG', 'RRN3P3', 'LOC101927814', 'MIR6859-3', 'MIR3680-2', 'SNX29P1', 'NPIPB3', 'MIR6859-2', 'OTOA', 'SLC7A5P2', 'LOC100190986', 'DDX11L10']
- genes near breakpoints documented in DDG2P: None

**dup(2)(p11.2)**

- tandem duplication on Chr2: 87119256(p11.2) - 87725469(p11.2)
- all genes near breakpoints: ['MIR4435-2', 'MIR4435-1', 'MIR4771-1', 'FAM110C', 'RGPDI', 'SH3YL1', 'PLGLB1', 'ANAPC1P2', 'RGPDI', 'ANAPC1P4', 'MIR4771-2', 'PLGLB2']
- genes near breakpoints documented in DDG2P: None
- all genes with +1 CN: ['MIR4771-1', 'MIR4771-2', 'CYTOR', 'MIR4435-1', 'MIR4435-2', 'ANAPC1P4']
- genes with +1 CN documented in DDG2P: None

**del(8)(q24.23)**

- deletion on Chr8: 136649768(q24.23) - 136863380(q24.23)
- all genes near breakpoints: ['OR4F21', 'RPL23AP53', 'LOC101927506', 'ZNF596', 'LINC02055']
- genes near breakpoints documented in DDG2P: None
- all genes with -1 CN: ['LINC02055']
- genes with -1 CN documented in DDG2P: None

**del(9)(p12p11.2)**

- deletion on Chr9: 39817228(p12) - 41293385(p11.2)
- all genes near breakpoints: ['LOC554249', 'LOC440896', 'LOC102724238', 'LOC107984035', 'MIR4477B', 'CBWD5', 'FGF7P3', 'FOXD4L6', 'CNTNAP3', 'CBWD6', 'GLIDR', 'CBWD3', 'MIR4477A']
- genes near breakpoints documented in DDG2P: None
- all genes with -1 CN: ['FGF7P3', 'LOC102724238', 'LOC554249', 'LOC105379252', 'FAM95B1', 'GXYLT1P3', 'AQP7P3', 'LOC105379443', 'LOC101929583', 'LOC102724580', 'MIR1299', 'FRG1HP', 'PGM5P2', 'LOC440896', 'FOXD4L6', 'CBWD3', 'CBWD6', 'CBWD5', 'MIR4477A', 'MIR4477B']
- genes with -1 CN documented in DDG2P: None

**del(15)(q14)**

- deletion on Chr15: 34346216(q14) - 34557000(q14)
- all genes near breakpoints: ['EMC4', 'GOLGA8B', 'GOLGA8A', 'MIR1233-2', 'LINC02252', 'SLC12A6', 'GJD2', 'MIR1233-1', 'LPCAT4', 'NUTM1', 'LOC101928174', 'KATNBL1', 'NOP10']
- genes near breakpoints documented in DDG2P:  
NOP10(606471): DYSKERATOSIS CONGENITA, AUTOSOMAL RECESSIVE 1(224230)  
SLC12A6(604878): AGENESIS OF THE CORPUS CALLOSUM WITH PERIPHERAL NEUROPATHY(218000)
- all genes with -1 CN: ['NUTM1', 'LPCAT4', 'GOLGA8A', 'MIR1233-1', 'MIR1233-2', 'GOLGA8B']
- genes with -1 CN documented in DDG2P: None

**ins(9)(p12p11.2p13.1)**

- insertion of Chr9: 41293385(p11.2) - 38885220(p13.1) into Chr9: 39817228
- all genes near breakpoints: ['CBWD3', 'LOC440896', 'LOC102724238', 'LOC107984035', 'MIR4477B', 'CBWD5', 'FGF7P3', 'FOXD4L6', 'CNTNAP3', 'CBWD6', 'GLIDR', 'LOC554249', 'MIR4477A']
- genes near breakpoints documented in DDG2P: None
- all genes with +1 CN: []
- genes with +1 CN documented in DDG2P: None