HumanHap 550K Beadchip (Illumina)
Neuroblastoma (NBL) – Copy Number

*Protocol performed at Nationwide Children's Hospital (extractions) and Children's Hospital of Philadelphia.

The DNA was extracted at Nationwide Children's Molecular Genetics Laboratory (MGL) using either the Qiagen All-Prep Co-isolation method or the Qiagen Genomic Tips protocol. QIAGEN Blood & Cell Culture DNA Kits and QIAGEN Genomic-tips with the Genomic DNA Buffer Set, provide an easy, safe and reliable method for the isolation of pure high molecular weight genomic DNA, direct from whole blood, lymphocytes and tissues. The procedure is based on optimized buffer system for lysis of cells and/or nuclei, followed by binding of genomic DNA to QIAGEN Anion Exchange Resin under appropriate low salt and pH conditions. RNA, proteins, dyes and low-molecular-weight impurities are removed by a medium-salt wash. Genomic DNA is eluted in a high-salt buffer and concentrated and desalted by isopropanol precipitation.

Nucleic acid labeling, hybridization array scanning and data normalization protocols were performed according to the Illumina manufacturer's protocol for the Illumina 550K array at the Children's Hospital of Philadelphia.
OverUnder algorithm (see *Attiyeh EF et al*.). Older L2 data that used reference genome hg18 was remapped to hg19 during analysis so that all L3 copy number segmentation results are using hg19.

Data transformation was done using the OverUnder algorithm[1].

References

1. Attiyeh EF *et al*. (2009). Genomic copy number determination in cancer cells from single nucleotide polymorphism microarrays based on quantitative genotyping corrected for aneuploidy. *Genome Res* **19**(2), 276-83 (PMID: 19141597)