

**NYU**

LS513 colorectal cancer (ATCC parent) - Chr 7-trisomic/7-disomic cell lines

Using KaryoTap, the LS513 aneuploid colon cancer cell line carries 3 copies of chromosome 7.

KaryoTap is a new method designed to investigate chromosomal instability and aneuploidy in tumors, which is crucial for understanding tumor development and creating diagnostic and therapeutic strategies. It combines custom targeted DNA sequencing panels with a computational framework to detect chromosome- and chromosome arm-scale aneuploidy and copy number neutral loss of heterozygosity across thousands of single cells. KaryoTap achieves an average accuracy of 83% for detecting arm events and 91% for chromosome events. Additionally, it can identify barcodes and gRNAs integrated into the cells' genome, facilitating pooled CRISPR- or ORF-based functional screens in single cells. The aneuploid colon cancer cell line, LS513 (+1q, +5, +7, +9, +13, XY), carries 3 copies of chromosome 7.

References

1. Mays et al. , <https://pmc.ncbi.nlm.nih.gov/articles/PMC11463636/>

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Category

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