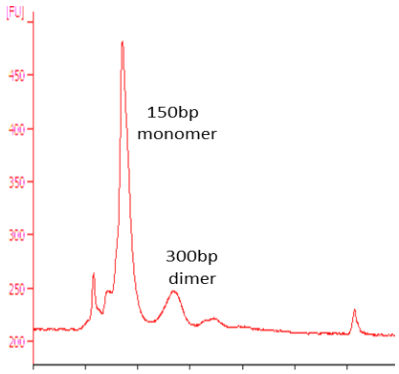
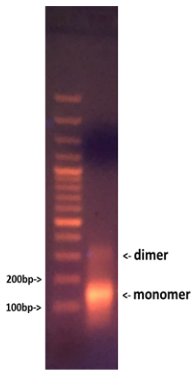
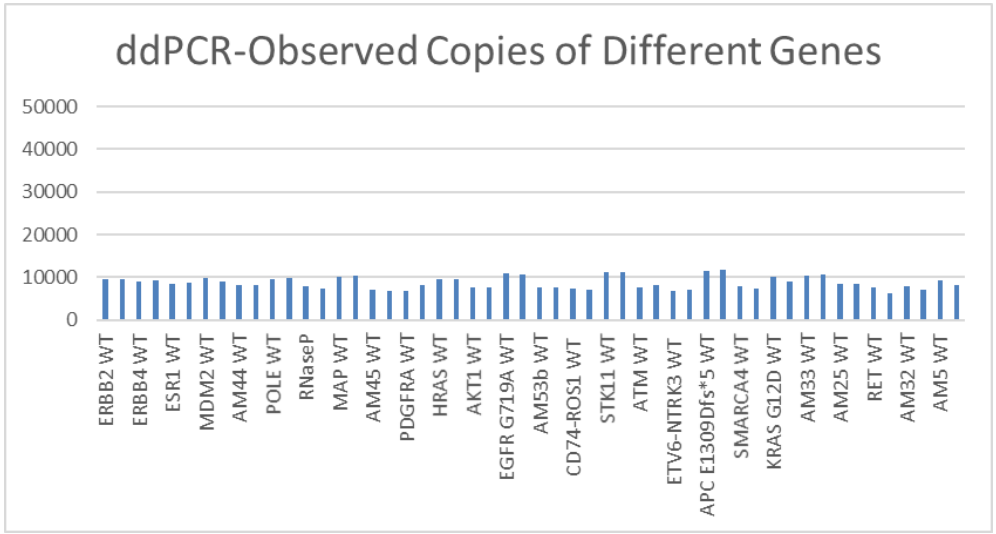
Characterization of cfDNA fragments

In human plasma, the cell free DNA of interest exists mainly as 150bp and 300bp DNA molecules naturally fragmented by endogenous nuclease. We provide the same type enzymatically ("nucleosomally") fragmented genomic DNA (cfgDNA) isolated from either normal cell lines or cell lines harboring critical mutations. The fragmented gDNA exhibits natural double-stranded DNA breaks and the same sequence patterns as human cfDNA both in DNA size and composition. These cell free gDNAs serve as great natural samples for liquid biopsy validation.





Different genes are randomly distributed among cfDNA fragments at equivalent copies



Randomness of mutation sites is demonstrated by the sensitivity of qualified copies (via ddPCR) to amplicon length