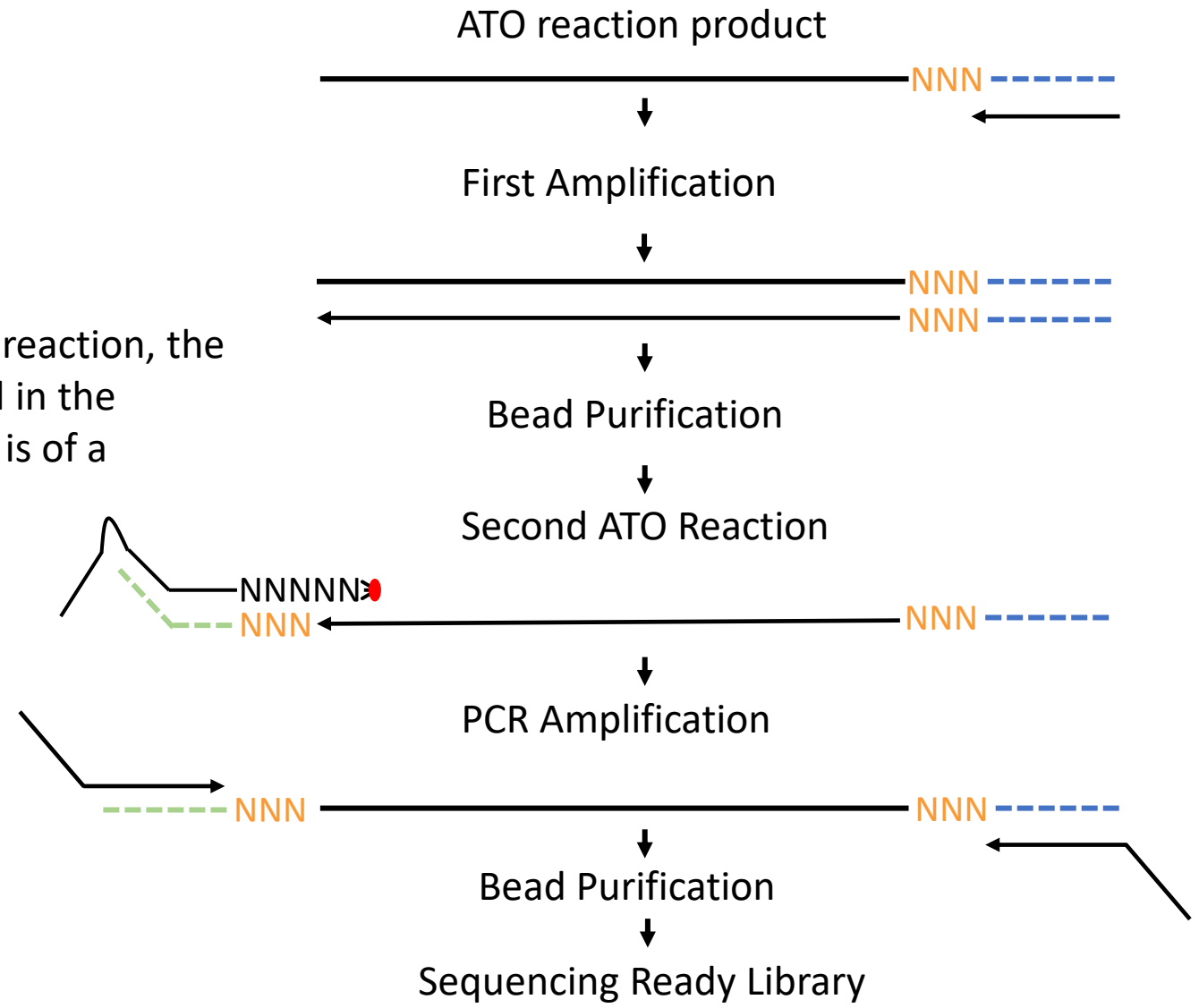
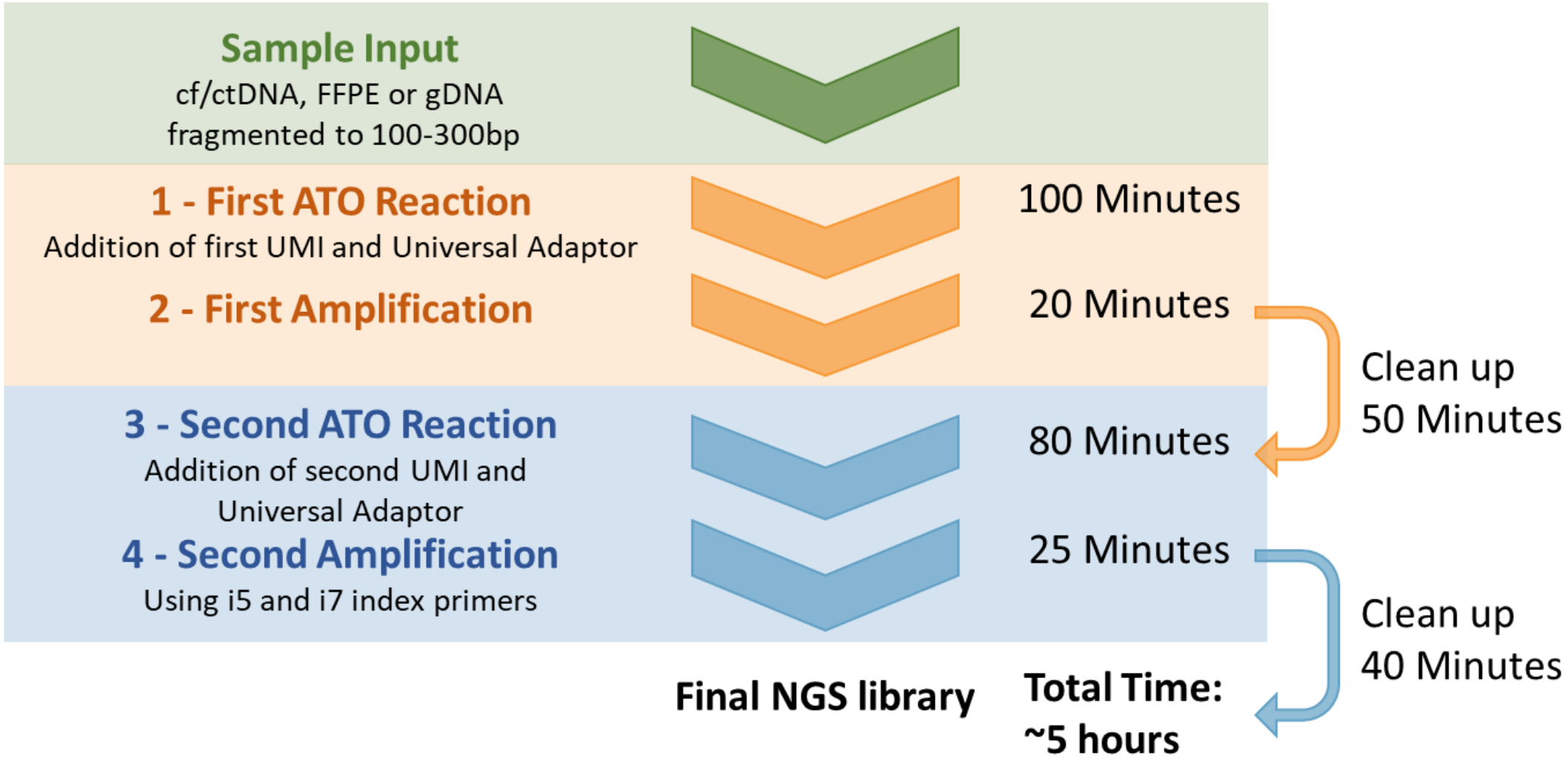
ATOM-Seq: XCeloSeq cfDNA Kit Protocol

As with the first ATO reaction, the UMI which is created in the second ATO reaction is of a variable length.

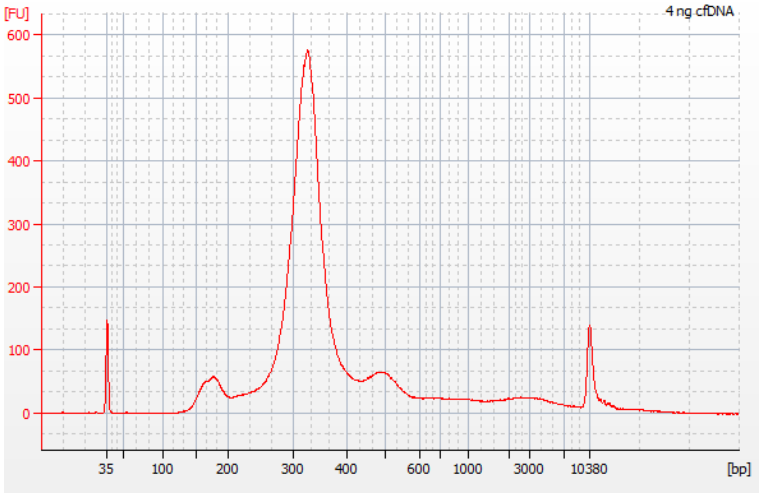


Representative Protocol

XCeloSeq cfDNA Protocol: Representative Data

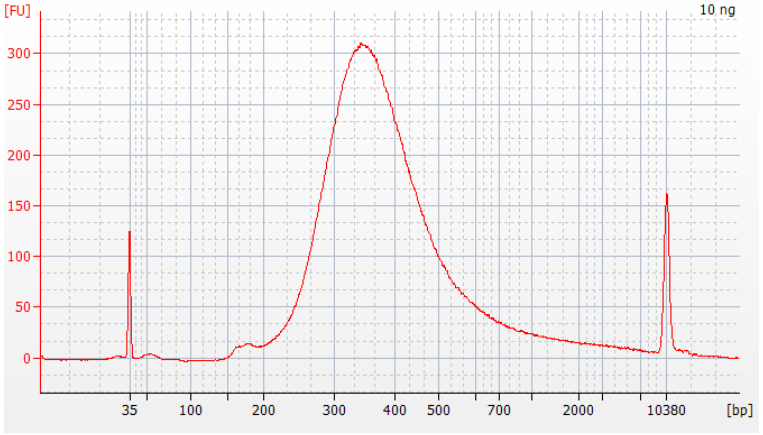


XCeloSeq cfDNA Protocol: Representative Data



cfDNA extracted from frozen human plasma using QiAMP MinElute ccfDNA kit

4ng cfDNA – 10 cycles PCR



10 ng enzymatically fragmented gDNA – 8 cycles PCR

XCeloSeq cfDNA Kit: Representative Data – Ultra Short DNA

To assess the capacity for ATOM-Seq protocols to work with very short DNA fragments we used a proxy for extremely fragmented and damaged DNA, short PCR oligos. We used in house primers as starting material, instead of fragmented gDNA. The primers ranged in length between 20-30bp.
Below is an example of a view in IGV (integrated genome viewer) showing the mapped sequencing results of a library generated using our XCeloSeq protocol. Peak width is shown in bp next to the peaks, these numbers match the size of the primes used perfectly.