Next Generation Sequencing Sample Preparation Simplified

AxyPrep Mag™ FragmentSelect kits

Post DNA shearing, the library construction process for next generation sequencing mostly requires fragment selection regardless of the platform. Obtaining high recovery post fragment selection is becoming an important contributor for the reduction of sequencing bias. The AxyPrep FragmentSelect-I kit is optimized for Illumina next generation sequencing platforms and Life Technologies (SOLiD) fragment size selection needs simplifying the library construction workflows. Where, the AxyPrep FragmentSelect-R is designed for fragment size selection needs in the Roche/454's DNA Genome sequencer library construction workflow. The AxyPrep Mag FragmentSelect kits utilize a unique paramagnetic bead technology for quick high-throughput optimized DNA size selection suitable for various next generation sequencing platforms.

How FragmentSelect works

- AxyPrep FragmentSelect kits consists of two major stages:
    1. Optimization of AxyPrep FragmentSelect beads ratio to input DNA for desired target DNA fragment size selection.
    2. The optimal AxyPrep FragmentSelect beads ratio is utilized for the isolation of the desired target DNA fragment size.
- AxyPrep FragmentSelect kits can be a one-stage process when large size DNA fragments is not a concern.

Product Highlights

- Optimized fragment selection chemistries for Illumina, SOLiD and Roche/454
- Versatile and flexible sequential fragment size selection: No gels needed
- Efficient removal of primer-dimers: No Need for further clean-up steps
- Manual and automation friendly
- Scalable: Tube, 96 and 384 well plate formats
- No centrifugation or filtration required

Versatile and Flexible Sequential Fragment size Selection

Figure 1. *Selected fragments with AxyPrep Mag FragmentSelect processed with an Agilent BioAnalyzer High Sensitivity DNA Chip.
Fragment size can be dialed in with sequentially increasing ratio of DNA FragmentSelect.*
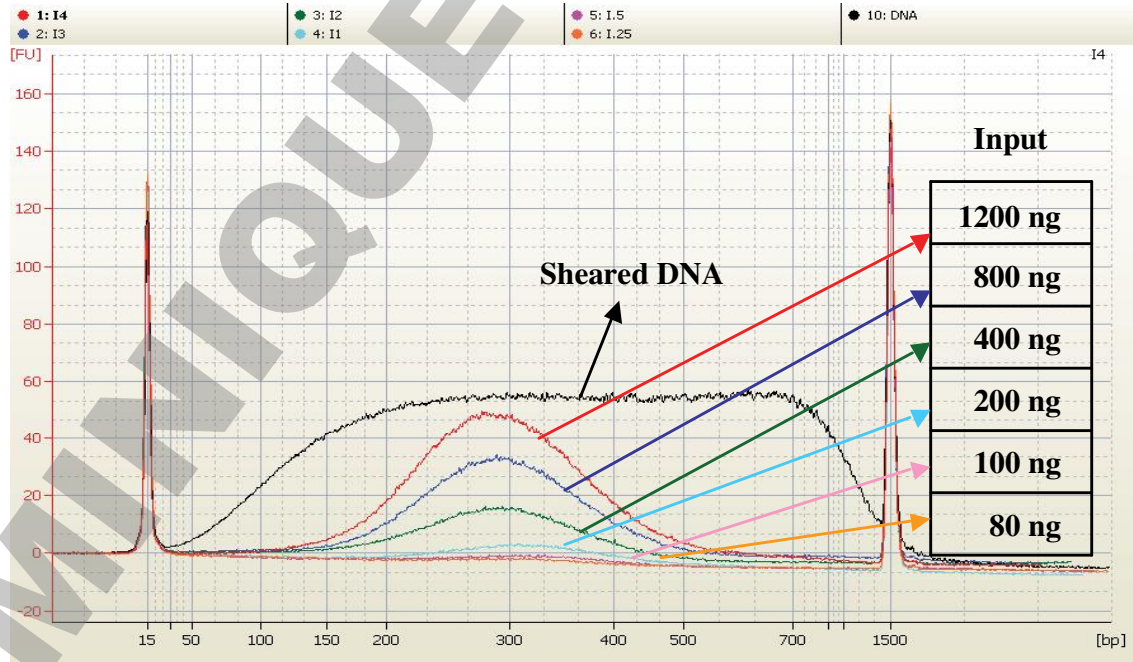
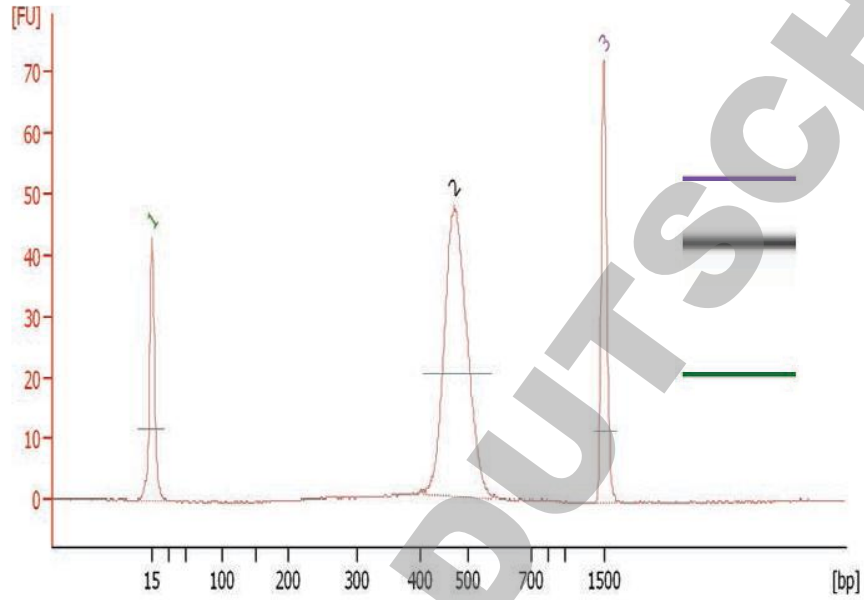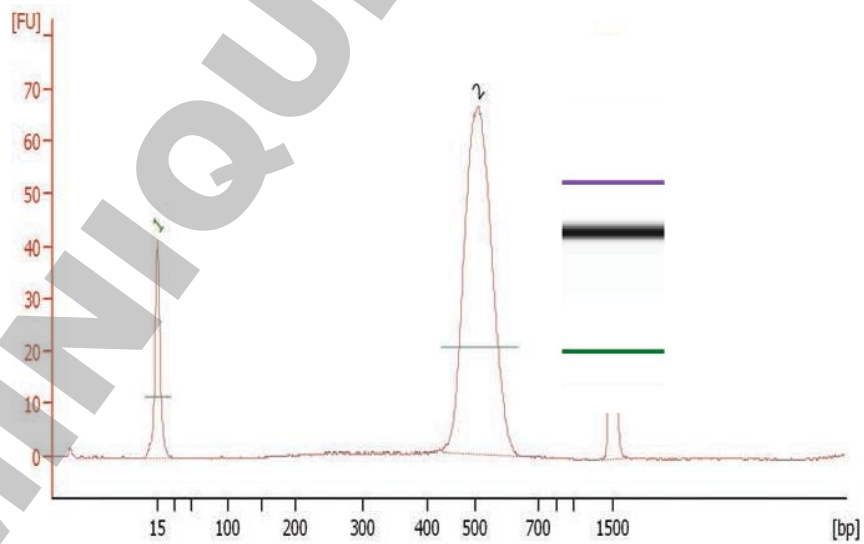## Consistent Performance Regardless of DNA Input

Figure 2. *The effect of concentration of input DNA on fragment selection measured by Agilent BioAnalyzer on a High Sensitivity
DNA chip.*

High Recovery

Final Library-Truseq Ambion Sybr

Final Library-Truseq AxyPrep Sybr

Figure 3. Library recovery utilizing Ambion or FragmentSelect measured by Agilent BioAnalyzer High Sensitivity DNA Chip
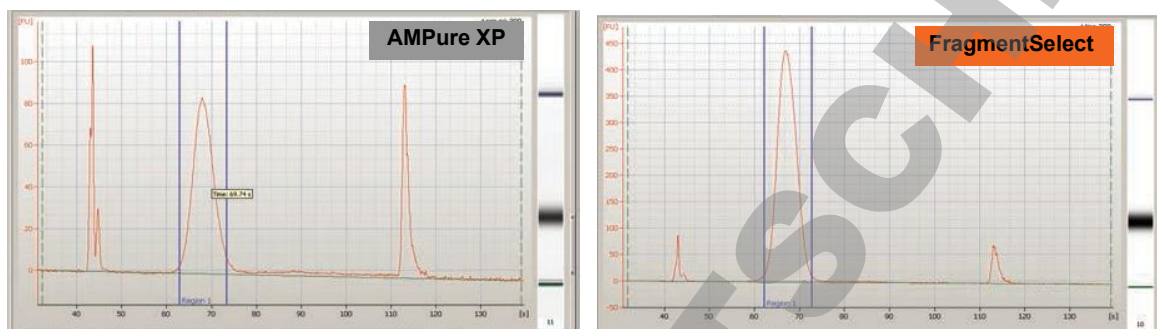
Superior Performance

Figure 4. Library recovery utilizing Agencourt Ampure XP or FragmentSelect measured by Agilent BioAnalyzer High Sensitivity DNA Chip.

Library yield achieved with AxyPrep MagFragmentSelect compared to Ampure XP

	FragmentSelect	AMPure XP
Target BP Size	300	300
BP Distribution	220-343	230-351
Avg. BP	277	288
Total DNA Input	1μg	1μg
Total DNA Output	**37.3153**	**6.0399**

618% More Yield

Ordering Information

Part Number	Product Name	# Preps
MAG-FRAG-R-5	AxyPrep FragmentSelect-R Kit- 5 mL	4
MAG-FRAG-R-50	AxyPrep FragmentSelect-R Kit- 50 mL	350
MAG-FRAG-R-250	AxyPrep FragmentSelect-R Kit- 250 mL	1750
MAG-FRAG-I-5	AxyPrep FragmentSelect-I Kit- 5 mL	4
MAG-FRAG-I-50	AxyPrep FragmentSelect-I Kit- 50 mL	380
MAG-FRAG-I-250	AxyPrep FragmentSelect-I Kit- 250 mL	1900

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