

Size-Select Kit for NGS Library Preparation

Norgen's Size-Select Kit for NGS Library Preparation provides a rapid, simple and efficient procedure for the size selection and clean-up of fragmented DNA. The resulting DNA is suitable for use in next generation sequencing library preparation. The kit selectively isolates DNA ranging in size from approximately 200-500 bp from a mixture of fragmented DNA, and removes various impurities including un-incorporated adaptors and enzymes, without the use of magnetic beads or agarose gel extraction. The kit is robust and is compatible with input volumes of up to 10 µg. The purified and size selected DNA can then be used in subsequent PCR reactions for next generation sequencing library preparation.

Size selection is based on first removing large DNA fragments from your mixture using the Size-Select Buffer. The small DNA, remaining in the supernatant (<400-500bp), is then transferred to Norgen's spin column. The DNA is preferentially purified from other impurities such as proteins and salts without the use of phenol, chloroform, or magnetic beads. The process involves first mixing the fragmented and adaptor-ligated DNA sample with the Size-Select Additive and Size-Select Buffer and centrifugation to remove DNA sizes >500 bp. Next, the Buffer RL is added to the supernatant and then is loaded onto a spin-column. Norgen's column binds nucleic acids in a manner that depends on ionic concentrations. Thus only the nucleic acids will bind to the column, while the contaminating proteins or nucleotides will be removed in the flowthrough. The bound nucleic acid is then washed with the provided Wash Solutions in order to remove DNA sizes of <200bp, such as smaller genomic DNA fragments, unligated adaptors and adaptor dimers. After washing, the DNA is eluted in a 30 µL volume.



Kit Specifications

Minimum Column Binding Capacity	50 µg	Maximum Amount of Starting Material: Solid food material	200 mg
		Liquid sample (e.g. milk or concentrated juice)	1 mL to 1.5 mL
Maximum Column Loading Volume	650 µL	Time to Complete 10 Purifications	45 minutes

Size-Select Kit for NGS Library Preparation Benefits

Fast and easy processing	Rapid processing using a spin-column format
No phenol or chloroform	No hazardous chemical required
Wide compatibility	Wide compatibility with a variety of food products for GMO-DNA isolation
Universal protocol	Universal protocol for food related pathogen DNA isolation (Gram positive and Gram negative)

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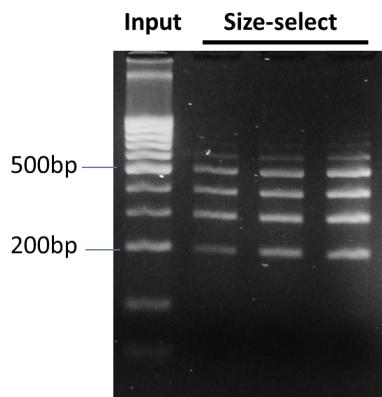


Figure 1. Efficient purification of 200-500 bp from a full DNA range. Ten µg of DNA (50-1000bp ladder with spiked genomic DNA band) was used per sample. Norgen's Size-Select Kit for NGS Library Preparation was used to purify DNA sizes from 200-500 bp. Following purification, 10 µL from each 30 µL elution was loaded on 2% TAE agarose gel. Norgen's Size-Select Kit for NGS Library Preparation demonstrated a good DNA recovery within the expected size range.

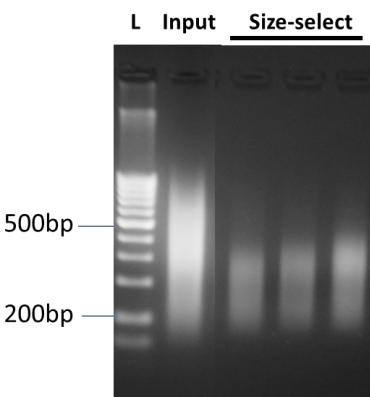


Figure 2. Efficient purification of 200-500 bp from HeLa cells fragmented DNA. Ten µg of sonication fragmented HeLa DNA (up to about 1000 bp) was used per sample. Norgen's Size-Select Kit for NGS Library Preparation was used to purify DNA sizes from 200-500 bp. Following purification, 10 µL from each 30 µL elution was loaded on 2% TAE agarose gel. Norgen's Size-Select Kit for NGS Library Preparation demonstrated a good DNA recovery within the expected fragmented size range.

Size-Select Kit for NGS Library Preparation Contents:

1. Size-Select Additive
2. Size-Select Buffer
3. Buffer RL
4. Wash Solution L
5. Wash Solution A
6. Elution Buffer B
7. Spin Columns
8. Collection Tubes
9. Elution tubes (1.7 mL)
10. Product Insert

Storage Conditions

The Size-Select Buffer should be kept tightly sealed and stored upright, away from light at 4°C. All other solutions should be kept tightly sealed and stored at room temperature (15-25°C) for up to 1 year without showing any reduction in performance.

Customer-Supplied Reagents and Equipment

- Benchtop microcentrifuge
- Micropipettors
- Nuclease-free water
- 96-100% ethanol (to be added to wash buffer)

Shipping Conditions

The Size-Select Kit for NGS Library Preparation Kit is shipped at room temperature.

Cat #	Description	Quantity
53600	Size-Select Kit for NGS Library Preparation	50 preps