SPRIworks Adapter Kit I

REF A84879

Intended Use

The SPRIworks Adapter Kit I is intended to be used with the SPRIworks Fragment Library Kit I - 10 REF A84801 or the SPRIworks Fragment Library Kit I - 50 REF A84803 for the preparation of fragment DNA libraries for single-read sequencing on the Illumina* Genome Analyzer.

Summary and Explanation

SPRIworks Adapter I is used in the ligation reaction that takes place during the fragment library construction process. The adapters are ligated to the ends of the fragmented DNA.

SPRIworks Primer F and SPRIworks Primer R are used in the PCR reaction to enrich the adapter-ligated DNA.

Principles of the Procedure

The SPRIworks Fragment Library System I employs enzymatic reactions, SPRI-based reaction purifications, and optional SPRI-based size selection to automatically generate fragment libraries from fragmented DNA. The SPRIworks Adapter I is used in the fragment library construction process.

After processing on the SPRI-TE instrument, libraries are further enriched with the SPRIworks Primer F and SPRIworks Primer R. Enriched libraries are used as templates for sequencing on the Illumina Genome Analyzer.

Product Information

SPRIworks Adapter Kit I
REF A84879

1. SPRIworks Adapter I
   1 x 120 µL at 50 µM
2. SPRIworks Primer F
   1 x 25 µL at 20 µM
3. SPRIworks Primer R
   1 x 25 µL at 20 µM

Specifications:

- Provided ready to use.
- Store upright as indicated.
- Allow frozen components to thaw completely on ice (4 to 8°C) before use.
- Freeze components after use and store at -25 to -15°C.
- Stable until the expiration date stated on the label when stored at -25 to -15°C.
- If the screw cap tube is damaged (i.e., broken cap or tube), discard the contents.

Contents: SPRIworks Adapter I contains double-stranded DNA and salts. SPRIworks Primer F and SPRIworks Primer R contain single-stranded DNA and salts.

Warnings and Precautions

- For Research Use Only.
- Patient samples and blood-derived products may be routinely processed with minimum risk using the procedure described. However, handle these products as potentially infectious according to universal precautions and good clinical laboratory practices, regardless of their origin, treatment, or prior certification. Use an appropriate disinfectant for decontamination. Store and dispose of these materials and their containers in accordance with local regulations and guidelines.

- Thaw the SPRIworks Adapter I tube on ice. Adapter I material may denature if allowed to reach room temperature (8 to 30°C.)
- The Material Safety Data Sheet (MSDS) is available upon request.

Input DNA and Sample Quality Assessment

Beckman Coulter recommends nebulizing 3 to 5 µg of genomic DNA for library construction using SPRIworks Library Systems. Observe local laboratory standard operating procedures for handling, processing, and storing samples. Beckman Coulter recommends that input DNA have the following characteristics:

- DNA is from the target organism and contains no contaminating DNA.
- DNA is double-stranded for downstream applications requiring double-stranded DNA.
- DNA is in fragments larger than 1.5 kb.
- DNA is free of particulate matter.
- DNA has an OD260/280 ratio of approximately 1.8.
- DNA has a minimum concentration of 50 ng/µL in water, or 10 mM TRIS (pH 7.4 to 8.0)
- DNA is not otherwise contaminated. Any contamination in the starting material will carry contamination into input DNA and into the fragment libraries constructed from the input DNA. Contaminated DNA may inhibit the library construction process.

Materials Provided

SPRIworks Adapter Kit I REF A84879

Materials Required But Not Provided

1. DNA Fragmentation Equipment
   SPRIworks Nebulizer Kit (REF A84871) or other commercial fragmentation equipment.
2. SPRIworks Fragment Library System I Kit
   SPRIworks Fragment Library Kit I - 10 (REF A84801) or SPRIworks Fragment Library Kit I - 50 (REF A84803).
3. Library Enrichment Reagents
   Commercial master mix; AMPure XP (REF A63880) for purification of PCR products; Agencourt SPRIPlate 96 Ring Super Magnet Plate (Agencourt P/N A32782), or other commercial low- or medium-throughput magnet stand; 70% ethanol.
4. Thermal Cycler
   Commercial thermal cycler.

Procedure

Refer to the appropriate system documentation and/or *Instructions for Use* for information on fragmenting input DNA, constructing libraries and enriching libraries.

Procedural Comments

Refer to the system documentation for a specific description of installation, start-up, principles of operation, system performance characteristics, general operating instructions, operational limitations and precautions, hazards, maintenance, and troubleshooting.

Technical Support

If you have any questions about this information, or for technical assistance regarding SPRIworks products or the SPRI-TE Nucleic Acid Extractor, contact Beckman Coulter.

- In the U.S.A. or Canada, contact Beckman Coulter Technical Support by phone at 800-854-3633, or online at www.beckman.com/customersupport. Before using online support the first time, you will need to register online.
- Outside the U.S.A. and Canada, contact your local technical support representative.

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