abcam

Product datasheet

DNA Library Preparation Kit (For Illumina®) ab185903

1 Image

Overview

Product name	DNA Library Preparation Kit (For Illumina®)
Sample type	DNA
Assay time	2h 30m
Product overview	The DNA Library Preparation Kit (For Illumina®) (ab185903) is a complete set of optimized reagents to carry out a successful DNA library preparation. The kit is suitable for preparing a DNA library for next generation sequencing applications using an Illumina sequencer, which includes genomic DNA-seq, ChIP-seq, MeDIP/hMeDIP-seq, bisulfite-seq, and targeted re-sequencing. The optimized protocol and components of the kit allow both non-barcoded (singleplexed) and barcoded (multiplexed) DNA libraries to be constructed quickly with reduced bias. **Starting Materials** Starting materials can include fragmented dsDNA isolated from various tissue or cell samples, dsDNA enriched from ChIP reactions, MeDIP/hMeDIP reaction, or exon capture. DNA should be relatively free of RNA since large fractions of RNA will impair end repair and dA tailing, resulting in reduced ligation capabilities. Input amount of DNA can be from 5 ng to 1 µg. For optimal preparation, the input amount should be 100 ng to 200 ng. For amplification-free, 500 ng or more is needed. Illumina® is a registered trademark of Illumina, Inc.
Notes	DNA library preparation is a critical step for next generation sequencing (NGS). To generate accurate sequencing data for NGS, the prepared library DNA should be sufficient in yield and of high quality. Also, as NGS technology is continuously improving, DNA library preparation is required to be optimized accordingly. Most of the currently used methods are unfortunately time-consuming, expensive, and inconvenient. Some of the methods are relatively quick by combining end repair and dA tailing or even ligation in one-step, but have been shown to generate significant G tailing or form concatmers at the ligation step or have high insertion bias. These side reactions eventually result in the prepared DNA library being less efficient and inaccurate. An ideal DNA library preparation method should be balanced in speed, convenience, small sample-suitability, cost-effectiveness, and accuracy.
Tested applications	**Suitable for:** ChIP-sequencing

Properties

Storage instructions Please refer to protocols.

Components	12 tests	24 tests
10X dA-Tailing Buffer	1 x 40µl	1 x 80µl
10X End Repair Buffer	1 x 40µl	1 x 80µl
2X HiFi PCR Master Mix	1 x 160µl	1 x 320µl
2X Ligation Buffer	1 x 250µl	1 x 500µl
Adaptors (50 µM)	1 x 15µl	1 x 30µl
Elution Buffer	1 x 1ml	1 x 2ml
End Repair Enzyme Mix	1 x 25µl	1 x 50µl
Klenow Fragment (3'-5' exo-)	1 x 15µl	1 x 30µl
MQ Binding Beads	1 x 1.6ml	1 x 3.2ml
Primer I (10 µM)	1 x 15µl	1 x 30µl
Primer U (10 µM)	1 x 15µl	1 x 30µl
T4 DNA Ligase	1 x 15µl	1 x 30µl

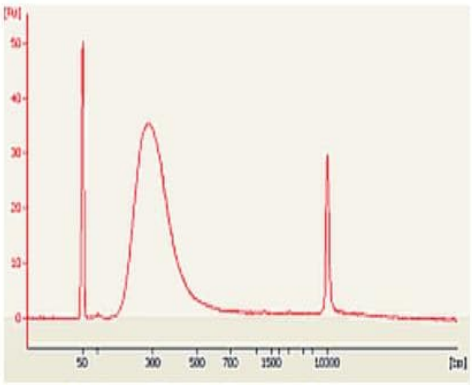
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab185903 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ChIP-sequencing		Use at an assay dependent concentration.

Images



Size distribution of library fragments

Human placenta DNA was sheared to 210 bps peak size and 20 ng of sheared DNA was used for DNA library preparation.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors