

Twist Universal Adapter System

Uniquely designed to maximize library yield

KEY BENEFITS

Maximize Performance

- Increase final yields during library preparation
- Drastically reduce adapter dimer formation
- Use fewer PCR cycles during library preparation to reduce errors and bias introduced during amplification

Increase Flexibility

- Can be used with all 'T-A' overhang ligation systems
- Available in 16 and 96 sample configurations
- Compatible with all Illumina sequencing chemistries (2- or 4-color) and flow cell types (non-patterned and patterned)

Sophisticated Design for Optimized Performance

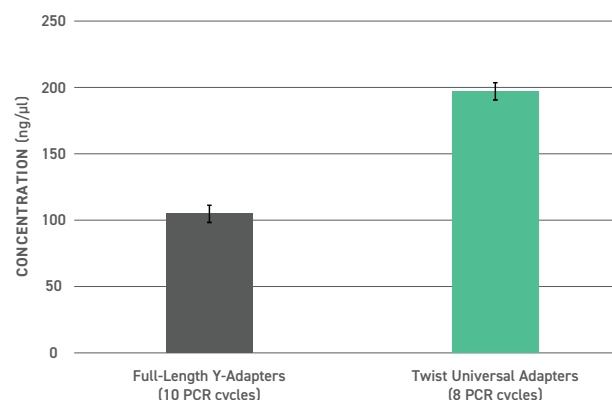
The Twist Universal Adapter System improves the overall performance of any 'T-A' overhang ligation library preparation workflow for next-generation sequencing (NGS) applications.

Engineered to optimize the performance of Twist Target Enrichment products, the system consists of:

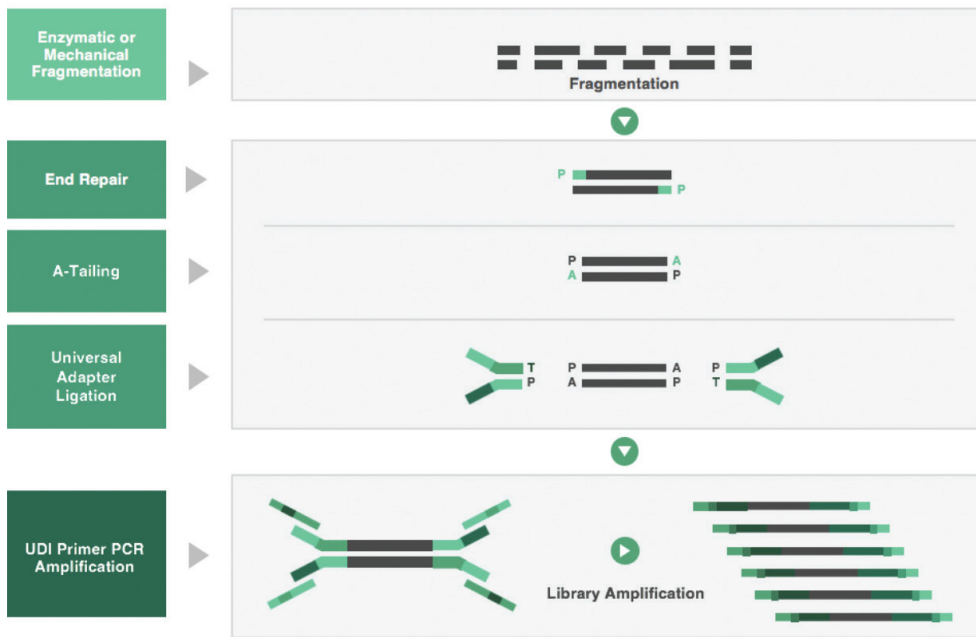
- **Twist Universal Adapters** — universal TruSeq-compatible adapters with a proprietary design that are compatible with all 'T-A' overhang workflows, eliminate formation of undesired adapter dimer, and contribute to increasing overall yield of the workflow.
- **Twist 10 bp Unique Dual-Indexed (UDI) Primers** — primers designed with unique dual indices for each mixed primer pair; provided in a 96-well plate format suitable for automation applications. Index design allows for correction of substitutions, insertions, and deletions within index reads during post-sequencing processing.

Increase Final Yields During Library Preparation

When used with Twist 10 bp UDI Primers, Twist Universal Adapters return higher total yields with fewer PCR cycles. This ultimately leads to the production of more library with fewer PCR errors to drive improvements in target enrichment efficiency.



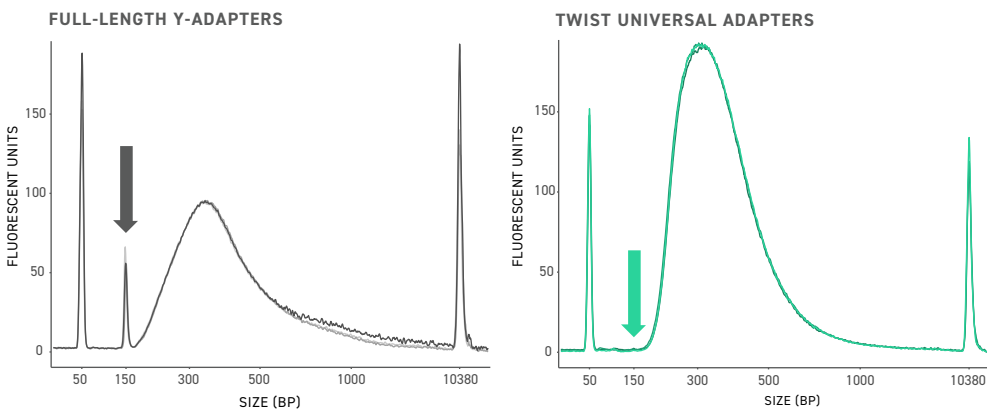
Twist Universal Adapters return higher total yields with fewer PCR cycles. DNA (50 ng NA12878) was processed with Twist Library Preparation EF Kits 1 & 2 (100572 and 100573). Samples were generated with full-length TruSeq-compatible Y-adapters and amplification primers (10 PCR cycles, N=12) or with Twist Universal Adapters and Twist 10 bp UDI primers (8 PCR cycles, N=12).



Overview of the library preparation workflow with Twist Universal Adapters. Using Twist Universal Adapters for insert ligation and UDI primer PCR amplification generates a robust library.

Reduce Adapter Dimer Formation for Robust Library Construction

Library preparation and target enrichment work together to influence the ability to call variants in sequencing. Consistently constructing robust libraries is important for successful hybrid capture. When adapters dimerize during library preparation, they generate undesired products and reduce the effective concentration of adapters available for ligation to inserts. Using Twist Universal Adapters and Primers during library construction minimizes this problem.



Twist Universal Adapters minimize adapter dimer formation during gDNA library preparation. DNA (50 ng NA12878) was processed with Twist Library Preparation EF Kits 1 & 2 (100572 and 100573). Samples were generated with TruSeq-compatible Y-adapters and amplification primers (10 PCR cycles) or with Twist Universal Adapters and Twist 10 bp UDI Primers (8 PCR cycles). Shown are overlays of representative electropherograms from both sample types (N = 3). Note the lack of the dimer peak (arrow) in the Twist Universal Adapter electropherogram.

Twist Universal Adapters are a component of the Twist portfolio of products for NGS Target Enrichment.

LEARN MORE

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ORDERING INFORMATION

101307: Twist Universal Adapter System
TruSeq Compatible, 16 Samples

101308: Twist Universal Adapter System
TruSeq Compatible, 96 Samples Plate A

101309: Twist Universal Adapter System
TruSeq Compatible, 96 Samples Plate B

101310: Twist Universal Adapter System
TruSeq Compatible, 96 Samples Plate C

101311: Twist Universal Adapter System
TruSeq Compatible, 96 Samples Plate D