Twist Universal Blockers

A single blocking solution for multiple adapter applications

KEY BENEFITS

Flexible Blocking Solution

- No need for adapter-specific blockers — blocks many different adapter designs
- Effective across singleplex and multiplex target enrichment workflows
- Improves on-target capture regardless of panel size

Improved On-Target Capture

- Prevents cross-hybridization between TruSeq-compatible adapters
- Enhances the performance of target enrichment workflows

Maximized Efficiency

- Ready-to-use formulation
- Reduces per-sample sequencing cost

In targeted next-generation sequencing (NGS), a blocking solution is used during probe hybridization to prevent non-specific hybridization between target enrichment probes and adapter sequences. Twist Universal blockers are designed to block multiple TruSeq-compatible barcode sequences and adapter lengths. They can accommodate multiple projects and applications, eliminating the need to purchase multiple blocker products for TruSeq-compatible adapters with varied index designs.

Eliminate the Need for Multiple Blocker Solutions

Some experiments may require the use of combinatorial dual index adapters (8 bp), others require unique dual index adapters (10 bp), and today's market requires the purchase of specific blockers for each adapter type. Twist Universal Blockers block many different adapter designs, allowing you to move between experiments with a single blocking solution (applicable to the TruSeq adapter system).

Block Off-Target Binding to Improve On-Target Capture

A proprietary mixture of complementary adapter sequences[1], Twist Universal Blockers bind genomic library fragments to block cross-hybridization between TruSeq-compatible adapters and improve on-target capture rates. Twist Universal Blockers can improve the performance of any target enrichment workflow that uses TruSeq-compatible adapters.

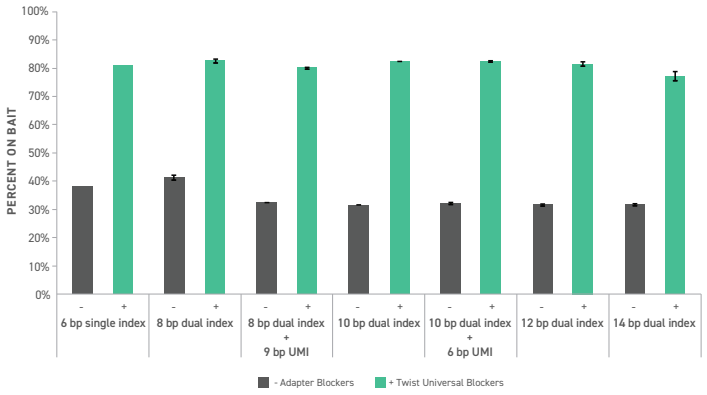
[1] Twist Universal Blockers also include a vial containing human Cot DNA sequences. These sequences feature repetitive elements that block non-specific binding between human gDNA library fragments during hybridization reactions.

Robust Blocker Design Maximizes Flexibility of Adapter Design

With Twist Universal Blockers, you can choose the best adapter index design for your experiment without penalty to target enrichment performance. Compatible with all Twist Target Enrichment Panels, they improve capture of on-target reads:

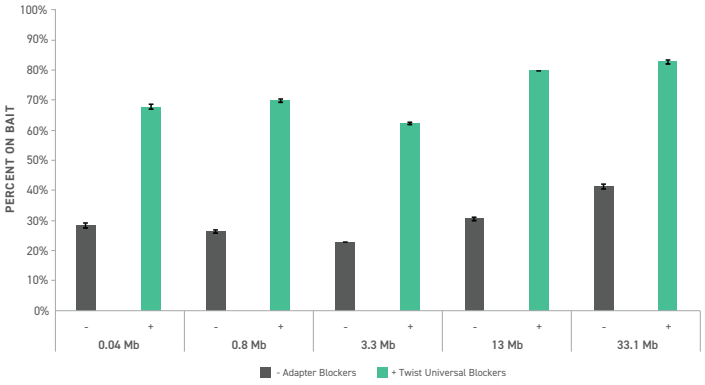
- Independent of index sequence type or panel size
- Across singleplex and multiplex target enrichment workflows

IMPROVE ON-TARGET PERFORMANCE ACROSS A WIDE RANGE OF INDEX DESIGNS



On-target performance of Twist Universal Blockers across a variety of single and dual index TruSeq-compatible adapters. Individual libraries were generated from a single genomic source (NA12878; Coriell) and TruSeq-compatible adapters. Each prepared library was then captured either in the absence or presence of Twist Universal Blockers with the Twist Human Core Exome Multiplex Hybridization Kit (33.1 Mb; part number 100574). Cot DNA was present in all samples. Following sequencing, reads were downsampled to 150x of targeted bases and evaluated using Picard metric tools with a mapping quality of 20. Percentage of Bases On-Bait includes both On-Bait and Near-Bait Bases. Error bars denote one standard deviation or range of observations; N ≥ 2.

IMPROVE ON-TARGET PERFORMANCE ACROSS A RANGE OF PANEL SIZES



On-target performance of Twist Universal Blockers across a variety of panel sizes. Individual libraries were generated from a single genomic source (NA12878; Coriell) and 8 bp dual-indexed TruSeq-compatible adapters. Samples were then captured either with or without Twist Universal Blockers with a Twist Human Core Exome Multiplex Hybridization Kit (part number 100574) and panels of various sizes. Cot DNA was present in all samples. Following sequencing, reads were downsampled to 150x of target size and evaluated using Picard metric tools with a mapping quality of 20. Percentage of Bases On-Bait includes both On-Bait and Near-Bait Bases. Error bars denote one standard deviation; N = 2.

Ready-to-Use Formulation Streamlines Your Workflow

A preformulated, ready-to-use system that reduces the steps required for optimized target enrichment, Twist Universal Blockers deliver industry-leading performance to allow you to focus on the design and execution of your singleplex and multiplex experiments.

Twist Universal Blockers are a component of the Twist portfolio of products for NGS Target Enrichment. Learn more at **twistbioscience.com/products/ngs**. Custom solutions are also available; please contact Twist Bioscience at **ngssupport@twistbioscience.com** for more information.

ORDERING INFORMATION

100856

Twist Universal Blockers, 2 Reactions

100578

Twist Universal Blockers, 12 Reactions

100767

Twist Universal Blockers, 96 Reactions