



TWIST BIOSCIENCE

Human Core Exome Kit

Twist Bioscience, the leader in synthetic DNA with unparalleled precision at scale, is redefining targeted sequencing performance with the Twist Human Core Exome Kit. This kit includes library preparation and enrichment components, allowing the flexibility to lower sequencing costs, increase sample throughput, and achieve a higher depth of coverage across target regions with uncompromising quality.

EXOME DEFINITION

- 33 Mb CCDS coverage
- 99% of ClinVar variants covered
- 99.3% of targeted regions covered at 20x with 5.3 Gb

KEY BENEFITS

Unparalleled uniformity for sequencing efficiency

Lower overall cost of sequencing

Deeper target coverage of difficult regions

High complexity libraries for high sensitivity variant calling

Greater flexibility

Seamless integration into any workflow with scalable throughput

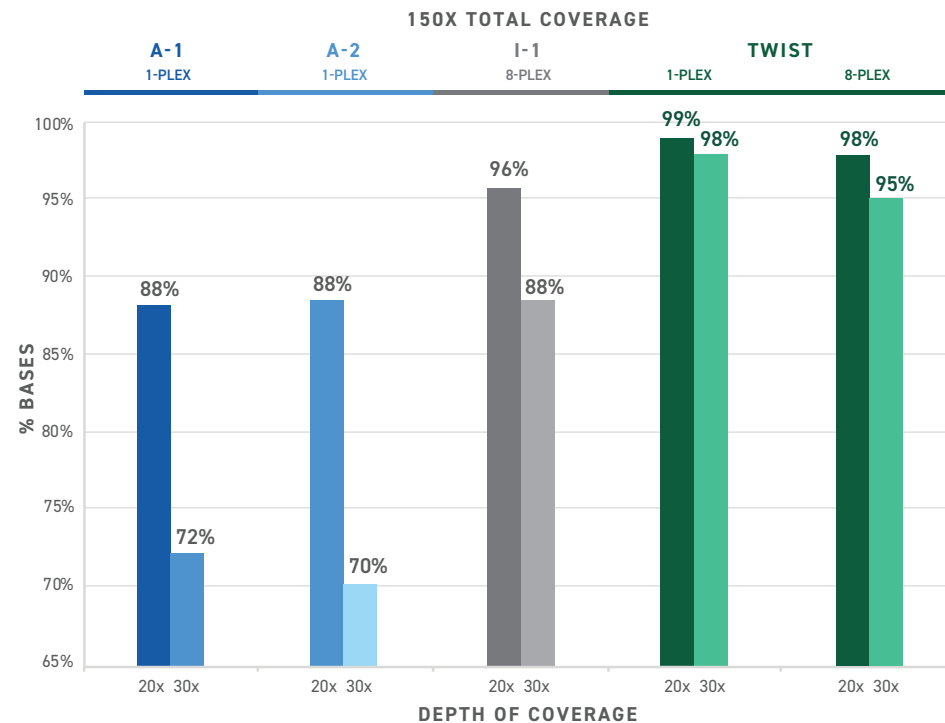


Figure 1. Twist Human Core Exome Kit resulted in a higher number of targets covered with 20 or 30 reads compared to leading competitors with comparable coverage of 1-Plex and 8-Plex. This result was achieved with a 1.32 fold 80 base penalty (green) compared to Competitor I's (grey) 1.65. The graphs also show high on-target rate and 50% less duplicates compared to Competitor I.



DON'T SETTLE FOR LESS IN TARGETED SEQUENCING.

Get in touch at sales@twistbioscience.com or learn more at twistbioscience.com/products/ngs

Revolutionizing Target Enrichment

A critical component for successful sequencing analyses is the quality of the capture reaction, which is driven by the uniformity of the reads. A more uniform capture leads to more uniform sequencing as shown by the lower fold 80 base penalty. With higher uniformity, sequencing reads can be effectively utilized to drive coverage on targets, limiting wasted reads.

High uniformity is the combined result of the probe design algorithm, dsDNA probes, and probe boosting based on GC content, amplification and enrichment bias. NGS QC on all Twist probe pools ensures that all probes are present at the correct concentrations and reproducibility of results is independent of our production.

	A-1	A-2	I-1	TWIST
	1-PLEX	1-PLEX	8-PLEX	8-PLEX
FOLD_80_BASE_PENALTY	1.93	1.71	1.69	1.34
HS_LIBRARY SIZE	123M	75M	123M	644M
PCT_EXC_DUPE	8.4%	11.3%	10.0%	1.6%

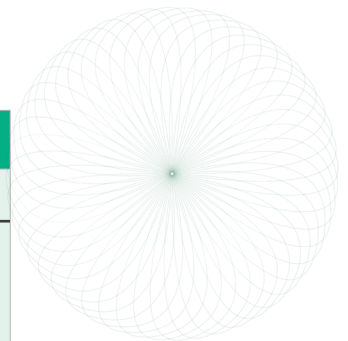


Figure 2. Twist Bioscience provides more uniformity and library complexity than competitor kits. Sequencing depth is 150x raw coverage

NGS Workflow

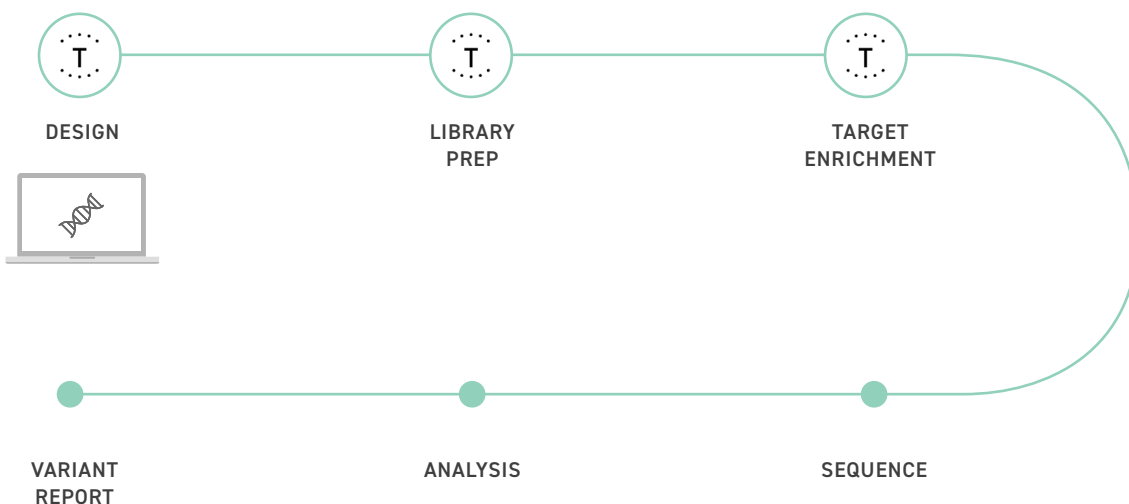


Figure 3. Target Enrichment Workflow with the Twist Human Core Exome Kit provides higher performance leading to better quality data

Customization of Core Exome Kit Content and Components

The ability to simply add your spike-in panel to the Core Exome creates added differentiation based on your research requirements. Rapid design optimization with a quick production turnaround reduces overall development time for your custom exome.

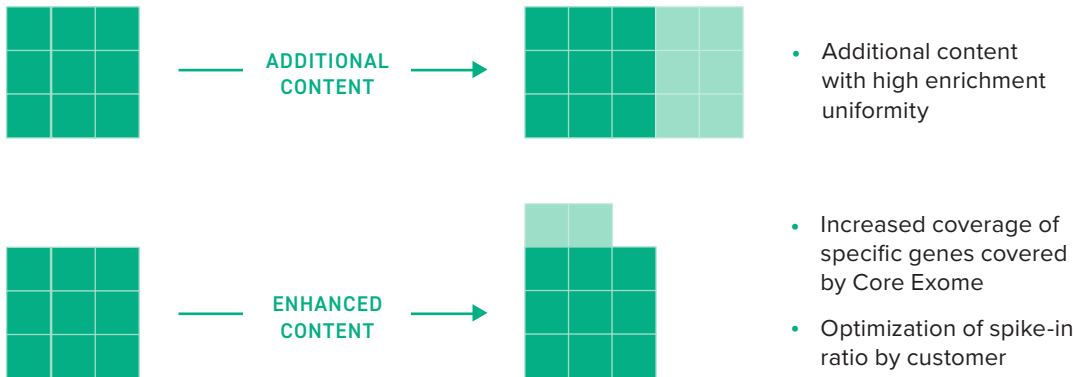


Figure 4. Twist Human Customized Core Exome Kit allows researchers to add custom content or enrich the current content for specific applications

Your Research. Your Needs. Your Kit.

Not all labs have the same workflow needs, so why settle for a one-size-fits-all solution? Twist Human Core Exome Kit gives you the flexibility to select components in a modular fashion. With four workflow configurations, one can utilize the complete kit or easily add components with minimal impact on an existing process.

With Twist Human Core Exome Kit, running more samples per sequencing run doesn't mean compromising on quality. When using Twist Human Core Exome Kit, single and multiplex enrichment efficiencies are very similar. Don't alter a workflow for a product, let Twist's NGS Solutions complement any research needs.

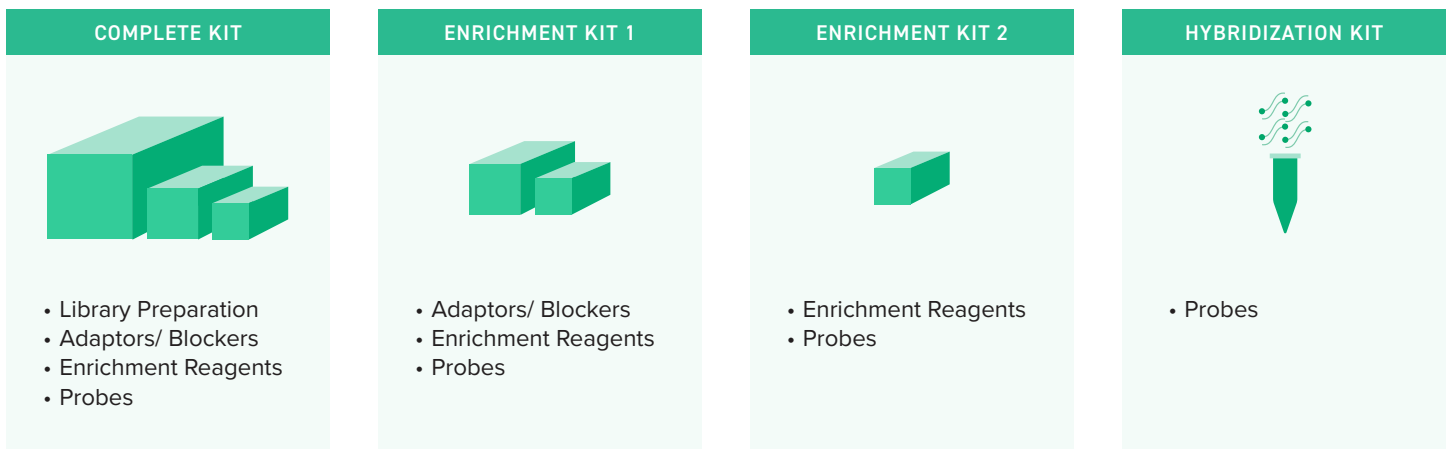
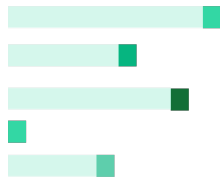


Figure 5. The versatility of a modular kit allows researchers to purchase the desired components needed for their workflow. Here, each kit contains reagents for 16 and 96 samples from singleplex to 8-plex hybridizations

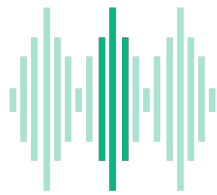
Don't Settle for Less

DISCOVER THE TWIST ADVANTAGE



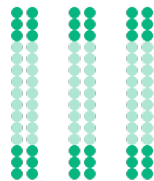
HIGH QUALITY PROBE SYNTHESIS

Unsurpassed uniformity and low error rate with Twist's silicon-based DNA synthesis platform enable high library performance metrics and singleplex data quality with multiplex capture



IMPROVED DESIGN

Focus on relevant regions and save on sequencing cost without missing important data



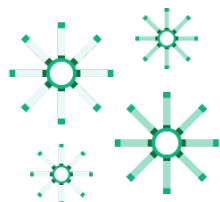
dsDNA PROBES

Target both strands of the genome for improved sensitivity



NGS-BASED QC ON FINALIZED PROBES SET

Remove uncertainty and guesswork from your assays



FLEXIBLE AND CUSTOMIZABLE WORKFLOW

Complete kit and modular library preparation and enrichment reagents for workflow integration with minimal optimization, and easy incorporation of custom content

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