

Mouse Exome Panel

EXOME DEFINITION

- Based on mouse genome assembly mm10
- 37.7 Mb comprehensive coverage of major gene annotation databases
- 95% of targeted regions covered at 20x with only 5Gb sequencing

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

Twist Bioscience, the leader in synthetic DNA with unparalleled precision at scale, is redefining the performance of targeted sequencing with the Twist Mouse Exome Panel.

The mouse is an extremely important model system for studying genetic variation, tumor mutations, and phenotypic outcomes as well as the therapeutic effect of pharmaceutical agents. As genetic variant databases are continuously updated, the Twist Mouse Exome panel is thoughtfully designed and built from the most current databases. When combined with Twist's expanding portfolio of library preparation and enrichment reagents, the complete toolset allows researchers to achieve industry-leading coverage across target regions while optimizing sequencing cost and sample throughput.

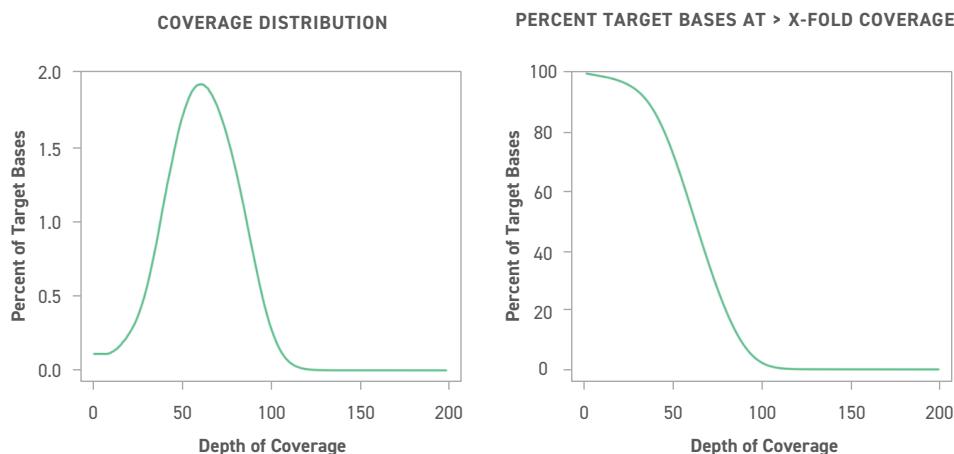


Figure 1. Distribution of base coverage for capture using the Twist Mouse Exome Panel. With 5-Gb sequencing, the narrow variance and mode of the coverage distribution (left) reduces both the number of bases found below the targeted level of coverage (right) and the over- and under-sequencing from the typically skewed coverage associated with poorer uniformity. This is aided by the balanced capture profile across a much wider range of target %GC content.

Revolutionizing Target Enrichment

A critical component for successful sequencing analysis is the quality of the capture reaction, which drives the uniformity of the reads. A more uniform capture leads to more uniform sequencing, as indicated by a lower fold-80 base penalty. With higher uniformity, sequencing reads can effectively drive coverage on targets, limiting wasted reads.

High uniformity is the combined result of the probe design algorithm, silicon-based synthesis of dsDNA probes, and calibration processes that ensure uniform amplification, GC content, and enrichment performance across all targets. NGS-based quality control of all Twist probe pools ensures that all probes are present at the correct concentrations and that the reproducibility of results is independent of our production process.

MOUSE STRAIN	
BALB	C57
BAIT_TERRITORY	41,736,401
Design Efficiency	0.9028
Mean Target Coverage	63.937378
% Duplicates	3.7
Uniformity (Fold-80 Base Penalty)	1.4
% TARGETED BASES AT:	
10x	96.1
20x	95.1
30x	92.9
	96.6
	95.2
	92.1

Figure 2. Picard metrics of the Twist Mouse Exome Kit with two strains of mouse. Data obtained with 5 Gb (135x) sequencing.

NGS Workflow

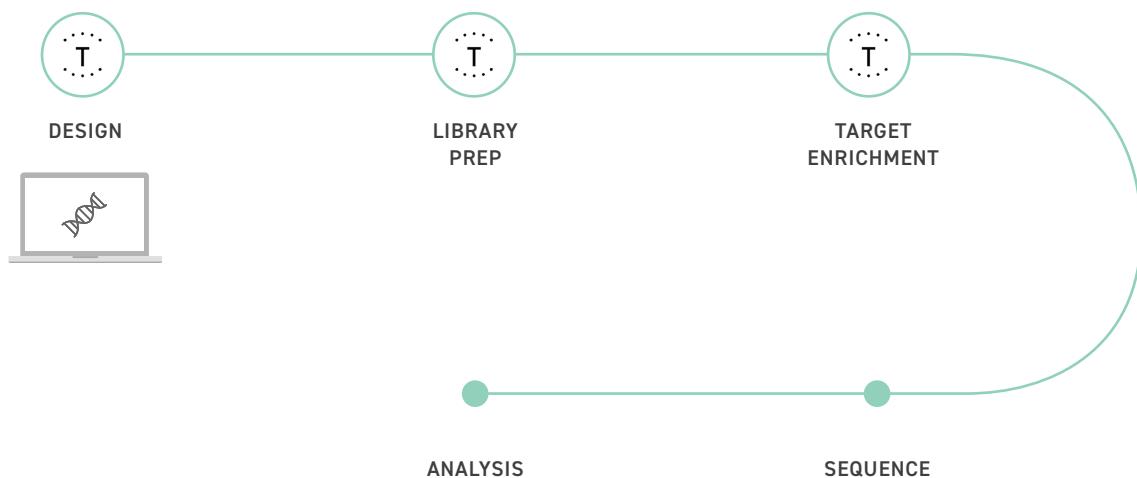


Figure 3. The Twist Target Enrichment Workflow using the Twist Mouse Exome Panel provides higher performance leading to better data quality.

Customization of the Twist Mouse Exome Panel Content and Components

The Twist Mouse Exome Panel focuses on known coding regions. To expand the range of targets covered, simply add a spike-in Twist Custom Panel for differentiation based on your research requirements. Use this strategy, for example, to add untranslated regions (UTRs), noncoding and regulatory elements, or any other targets of interest. Rapid design optimization combined with a quick production turnaround to reduce overall development time for your custom exome.

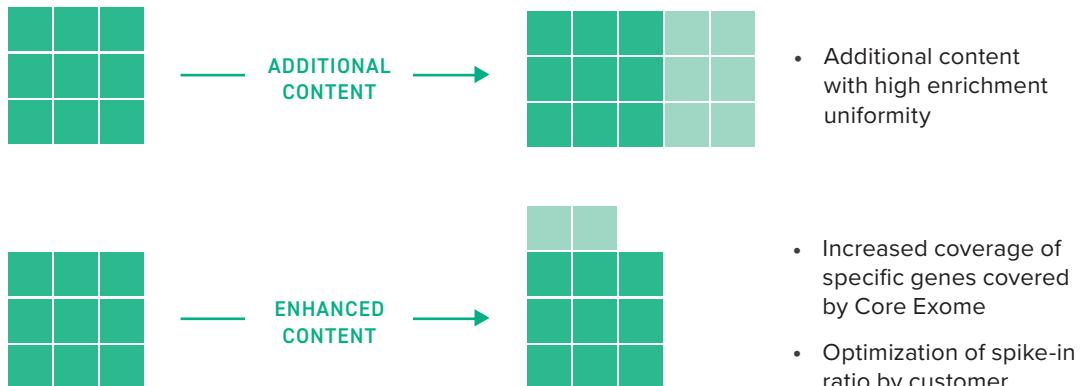


Figure 4. Add custom content or enrich the Twist Mouse Core Exome for specific applications.

Your Research. Your Needs. Your Kit.

Not all labs have the same workflow needs, so why settle for a one-size-fits-all solution? The Twist Mouse Exome Panel and associated library preparation reagents give you the flexibility to select components in a modular fashion. With four workflow configurations, you can use the complete kit or easily add components with minimal impact on an existing process.

Run more samples per sequencing run without compromising on quality and achieve similar enrichment efficiencies with single or multiplex enrichments. There is no need to alter a workflow — let Twist's NGS Solutions complement any research needs.



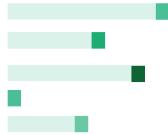
NGS Product Line

LIBRARY PREP	ENRICHMENT REAGENTS	PROBES
Enzymatic Fragmentation	Universal Blockers	Catalog Panels
Mechanical Fragmentation	Enrichment Reagents	Custom Panels
ADAPTERS	Fast Enrichment Reagents	
Universal Adapters	Enrichment Beads	

Figure 5. The versatility of a modular Twist Mouse Exome Panel allows you to purchase only the components you need for your workflow. Each kit contains reagents for 16 or 96 samples from singleplex to 8-plex hybridizations.

Don't Settle for Less

DISCOVER THE TWIST ADVANTAGE



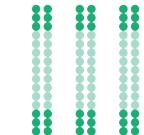
HIGH QUALITY PROBE SYNTHESIS

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



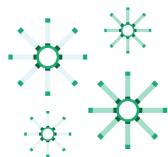
dsDNA PROBES

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

The Twist Mouse Exome Panel is a component of the Twist portfolio of products for NGS Target Enrichment.

LEARN MORE

twistbioscience.com/ngs

sales@twistbioscience.com

ORDERING INFORMATION

102035

Twist Mouse Exome, 2 Reactions, Kit

102036

Twist Mouse Exome, 12 Reactions, Kit

102037

Twist Mouse Exome, 96 Reactions, Kit

Twist products are subject to certain use restrictions as set forth in Twist's Supply Terms and Conditions (www.twistbioscience.com/supply-terms-and-conditions). Twist Bioscience's quality management system governing the design and manufacture of NGS Target Enrichment Panels is ISO 13485:2016 certified (San Francisco, CA).