

What are the delivery formats supported?

MRD Express panels currently ship as a 6-reaction panel (SKU 129334, "Twist MRD Express Panel, 6 Reactions" 4 μ L per reaction, so 25 μ L total plus 25% volume overage) in tube formats selectable at order intake.

The following tube options are available:

- 0.5 mL Starstedt DNA low-binding micro tube
- Thermofisher Matrix™ 500 μ L ScrewTop Tubes (available through API)
- 0.5 mL Azena FluidX tube (available through API)

How are the panels quality controlled?

Every panel is evaluated against two independent QC metrics, both gated automatically before a panel is allowed to ship.

Synthesis runs OQC (Oligo Quality Control). Pre-determined control oligo clusters are spatially distributed across the synthesis chip. These are NGS-library-prepped and sequenced on illumina sequencing platforms, then aligned back to the expected control sequences to ensure metrics of error rate, uniformity, and dropout pass a pre-defined threshold for that synthesis run.

Shipping Yield QC (Panel Quality Control). After pooling and resuspension, oligo concentration is measured directly via a 96-well ssDNA Qubit assay against a standard curve, confirming the panel is above the minimum concentration of 0.08fmol/probe/reaction needed to meet per-reaction requirements.

Both checks are reviewed automatically by the manufacturing software; anything failing threshold is routed into a redo loop and are not shipped. A panel only proceeds to shipping after passing both OQC and yield in a final automated QA gate, in-process checks at that stage also confirm the correct tube type and shipping container were used. Every lot gets an auto-generated CoA reporting OQC and yield disposition, available to the customer via API or the shipping notification email.

How reproducible is panel manufacturing run-to-run?

Highly. To characterize this, the same designs were manufactured on independent production runs and taken through complete capture and sequencing workflow. Per-target duplex coverage correlates tightly between runs at every panel size ($R^2 \geq 0.92$). Performance does not drift with production date, so a panel ordered today performs like the same panel ordered next month.

Every panel is manufactured through the same fixed process at the same probe-level quality specification, and every panel ships at the same minimum.

HAVE QUESTIONS?

Get in touch at sales@twistbioscience.com or learn more at [twistbioscience.com](https://www.twistbioscience.com)



Turnaround Time (TAT) and Panel Submission

TAT is defined as the MRD Express panels will leave Twist's hands and enter shipping logistics by the end of the business day after order intake. For example, if a customer orders on Monday, Twist will manufacture and ship out the panels by the end of day Tuesday. Depending on where the customer is located, it may take one to several days (international) for the package to arrive.

Submitting an order: orders go in with an input probe sequence file, via API or the Twist eComm site (internal support can also place an order on a customer's behalf through eComm). Beyond meeting the cutoff below, there are currently no additional file-format, target-count, or metadata requirements to communicate.

One nuance worth flagging: Twist's standard panel shipping process uses a 2:00 PM PT cutoff for next-day carrier pickup. The MRD Express team is actively working on supporting shipment outside that window for a subset of launch customers, this piece of the workflow may still change as launch approaches, so don't commit to shipping times past 2:00 PM PT without checking for an update.

Should a panel design use 1x or 2x tiling?

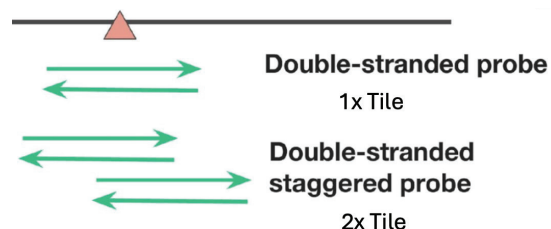
1x tile is one double stranded probe per target.

2x tile is two double stranded probes per target.

2x tiling is the more robust option as it delivers higher yield and more molecular recovery per target, which is usually what matters most for MRD's low-allele-fraction use case. The tradeoff is coverage breadth: a 2x-tiled panel covers fewer total targets than the same design run at 1x.

In short, 2x favors sensitivity and per-target robustness; 1x favors broader targets. The right call depends on whether the customer's use case needs more targets or more confident recovery per target.

Twist observes 2x Tiling provides ~20% increase in library diversity (HS Library Size and Mean Target Coverage)



Schematic for 1x or 2x Tile Designs. Probe placement across a single variant site (triangle). At 1x tiling, one double-stranded probe pair covers the variant. At 2x tiling, two double-stranded probe pairs are placed in a staggered arrangement across the same site.



Can I multi-plex with MRD Express panels?

Yes, MRD panels are compatible with up to 8-plexing.

Panel Information

ATTRIBUTE	DETAIL
Panel size	1 to 10,000 probes
Variant types	SNVs, small indels, CNVs, and exonic target regions
Design input	Variant target coordinate BED file or FASTA probe sequences
Genome builds	hg19 and hg38
Workflow compatibility	Existing Twist library preparation and hybrid capture workflows
Recommended protocol	Twist Standard Hybridization v2 and Fast Hybridization
Ordering	Twist eCommerce platform or API integration for LIMS-connected ordering
Intended use	Research Use Only

Turnaround times are estimates only and are not guaranteed. Actual turnaround may vary based on order specifications, sample characteristics, processing requirements, operational capacity, and other applicable factors. Product information, specifications, features, availability, and timing are subject to change without notice. Twist products are for research use only. They are not intended for the diagnosis, prevention, monitoring, or treatment of a disease or condition. Twist Bioscience assumes no liability regarding the use of its products in unintended applications.

LEARN MORE

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ORDERING INFORMATION

SKU 129334, Twist MRD Express Panel, 6 Reactions

Panel size and pricing tier available on twistbioscience.com