

BD OMICS-One™ WTA Next Assay

Frequently Asked Questions

Performance and Technical

1 How does the performance of the new BD OMICS-One™ WTA Next Assay compare to the current BD Rhapsody™ Whole Transcriptome Analysis (WTA) Assay?

The BD OMICS-One™ WTA Next Assay delivers significant improvements in molecule and gene recovery. We observed an average 120% and 67% increase in molecule and gene detection, respectively, across three PBMC donors at 50,000 reads per cell.

2 Have other performance metrics beyond gene recovery improved?

Yes. Beyond significantly higher molecule and gene counts, the BD OMICS-One™ WTA Next Assay reduces mitochondrial reads by over 70% compared to the BD Rhapsody™ WTA Assay—delivering cleaner, higher-quality data.

3 How does the performance of multiomic assays compare to assays run on the BD Rhapsody™ WTA Assay?

The BD OMICS-One™ WTA Next Assay enhances gene recovery across all multiomics workflows. Improvements are workflow-dependent, ranging from ~40% increase with CITE-seq to ~155% with ATAC-seq at 25,000 reads per cell.

4 How does the BD OMICS-One™ WTA Next Assay compare to the 10x Genomics GEM-X v4 Assay?

BD OMICS-One™ WTA Next Assay exceeds GEM-X assay across key metrics. In head-to-head comparisons, we recovered ~5% more genes per cell at 50,000 reads per cell, delivering unmatched performance in single-cell RNA-seq analysis.

5 What are the key differences between the BD OMICS-One™ WTA Next Assay and BD Rhapsody™ WTA Assay workflows?

The BD OMICS-One™ WTA Next Assay features optimized reagents and refined processing steps that enhance sensitivity without changing the fundamental workflow. Contact our Support team for detailed protocol comparisons specific to your application.

6 What sequencing depth do I need?

The BD OMICS-One™ WTA Next Assay requires less sequencing than the BD Rhapsody™ WTA Assay while delivering superior results. Exact depth depends on your sample type and analysis goals. Contact our Support team for specific recommendations.

7 Can I use my existing protocols?

No. The BD OMICS-One™ WTA Next Assay, for the most part, maintains the same workflow as the BD Rhapsody™ WTA Assay with identical hands-on time and processing steps but you must use the updated protocols.

8 What's the sample recovery rate?

We maintain 80%+ recovery rates, consistent with the performance of the BD Rhapsody™ WTA Assay and superior to typical results from other gene expression assays on the market.

9 Does this work with challenging samples?

Yes. The new assay's enhanced sensitivity enables capture of rare transcripts and analysis of cells with low mRNA content more effectively than previous versions.

10 Is the BD OMICS-One™ WTA Next Assay compatible with BD® Single-Cell Multiplexing Kits, BD® AbSeq Antibody-Oligos and BD Rhapsody™ ATAC-Seq and TCR/BCR Next Assays?

Absolutely. The BD OMICS-One™ WTA Next Assay maintains full compatibility while delivering enhanced gene expression performance across all supported multiomics workflows.

11 Can I upgrade mid-study from the BD Rhapsody™ WTA Assay to BD OMICS-One™ WTA Next Assay?

Absolutely. Contact your regional sales/technical team to discuss study-specific transition strategies.



Pricing and Economics

12 Is the BD OMICS-One™ WTA Next Assay more cost-effective than the BD Rhapsody™ WTA Assay?

Yes, the BD OMICS-One™ WTA Next Assay reduces per-sample costs by up to 10% compared to the BD Rhapsody™ WTA Assay despite enhanced performance.

13 Why is the kit price higher if per-sample costs are lower?

The BD OMICS-One™ WTA Next Amplification Kit (Cat. No. 572620) supports eight (8) reactions versus the BD Rhapsody™ WTA Assay's 4-reaction kit (Cat. No. 633801). While the kit price is slightly higher, you get twice the capacity, resulting in lower per-sample cost.

14 How does pricing compare to other WTA assays in the market?

The BD OMICS-One™ WTA Next Assay delivers superior performance at a lower per-sample cost—better value than market alternatives.

Sample Handling and Storage

15 Can I store samples before processing?

Yes. In addition to fresh processing, you can store your samples at 4 °C for up to 72 hours in BD® OMICS-Guard Sample Preservation Buffer or cryopreserve them for long-term storage with our cryopreservation solution.

16 Does storage affect performance?

No. Our preservation solutions maintain sample quality across all storage conditions.

17 Can I batch samples from different time points?

Absolutely. The flexible storage options enable multi-site, multi-timepoint collection and batching.

Throughput and Scalability

18 How many cells can I process?

You can load up to 100,000 cells per lane on our 8-lane cartridge and capture 80%+ of 800,000 cells per full cartridge run.

19 How does the throughput compare to other WTA assays on the market?

Our system processes 5x more cells per run than other WTA platforms.

20 Can I scale down for smaller studies?

Yes. The BD OMICS-One™ WTA Next Assay delivers consistent performance across cell inputs from 1,000 to 100,000 per lane, making it ideal for both pilot studies and large-scale experiments without requiring workflow modifications or reagent adjustments.

Product Availability and Configuration

21 Will the BD Rhapsody™ WTA Assay remain available once the BD OMICS-One™ WTA Next Assay is launched?

The main amplification kit for the BD Rhapsody™ WTA Assay (Cat. No. 633801) will phase out as the BD OMICS-One™ WTA Next Assay kit becomes available. We recommend transitioning to the BD OMICS-One™ WTA Next Assay for superior performance and economics.

22 Is training required for the BD OMICS-One™ WTA Next Assay?

No additional training is needed. The BD OMICS-One™ WTA Next Assay uses slightly different protocols than the BD Rhapsody™ WTA Assay but with the same instrumentation, workflow structure and processing steps.

23 What reagents are needed for the standalone WTA workflow? How has this changed from the BD Rhapsody™ WTA Assay?

All reagents remain identical except for the amplification kit. The diagram below shows the reagent kits needed for eight (8) tests using the BD OMICS-One™ WTA Next Assay versus the BD Rhapsody™ WTA Assay. Note that the new amplification kit (Cat. No. 572620) supports eight (8) tests compared to the BD Rhapsody™ WTA Assay's 4-test capacity.



24 What additional kits do I need for the multiomics workflows?

Multiomics workflows require the new kit plus workflow-specific reagents. Refer to the product brochure for the detailed purchasing guide outlining the complete bundles needed for CITE-seq, ATAC-seq and TCR/BCR profiling applications.

25 What indexes are included in the amplification kit?

The new amplification kit provides unique i5 and i7 index series enabling a Unique Dual Indexing (UDI) strategy for eight (8) standalone and multiomics libraries. Refer to each assay configuration protocol for specific index usage guidelines.

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