



# Small RNA-Seq made simple.

## Gel-free small RNA library prep with reduced bias

The **NEXTFLEX™ Small RNA-Seq Kit v4** provides a completely gel-free library preparation solution for Illumina® and AVITI™ sequencing platforms. Our approach to reducing bias involves optimization of the ligation reaction and the use of dimer reduction oligonucleotides. These changes result in decreased bias in comparison to standard protocols.

NEXTFLEX Small RNA-Seq Kit v4 allows preparation of libraries ready for sequencing in approximately 6 hours, with as little input as 1 ng of total RNA. Libraries prepared with this kit have a higher proportion of mapping reads and unique miRNAs than leading competitors (Figure 1 and 2).

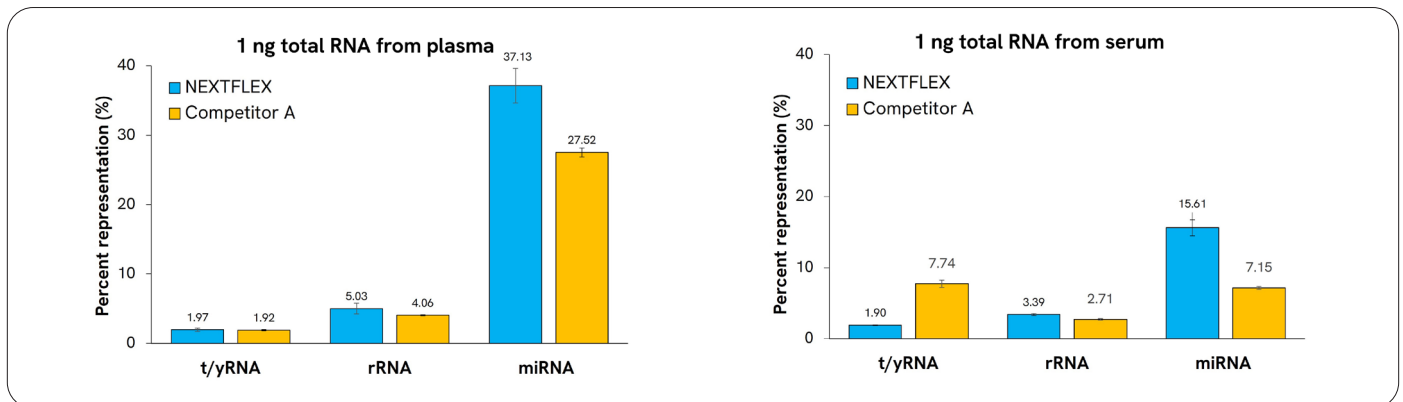


Figure 1: Percentage of miRNA detected by NEXTFLEX Small RNA-seq Kit v4 in 1 ng of plasma or serum compared with leading competitor workflow.

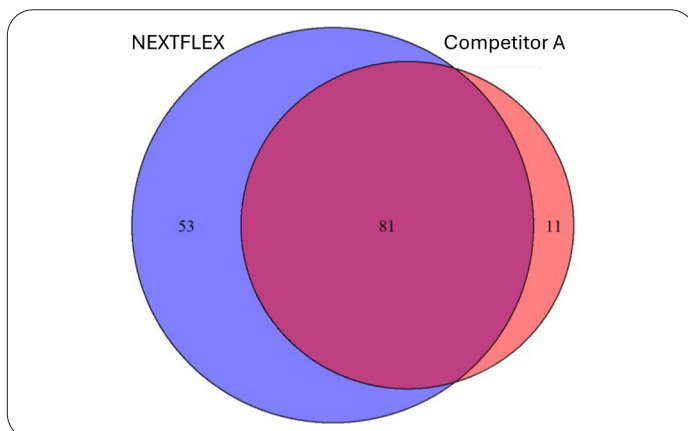


Figure 2: Venn diagram showing the unique miRNA species detected from 1 ng serum RNA. NEXTFLEX Small RNA-seq Kit v4 identifies 45% more unique miRNA species than competitor workflow.

### Highlights

- Gel-free from 1 ng total RNA or more
- Exceptional miRNA discovery
- Optimized for challenging samples
- Ready to sequence in less than 6 hours
- Automation-ready protocol on the Revvity liquid handling workstations
- Up to 384 UDI barcodes for multiplexing and minimal index hopping on any Illumina®/Element® AVITI™ platforms

## Addressing common problems in small RNA studies with unique accessories

The **NEXTFLEX Blood miRNA blockers** deplete common miRNA in blood and plasma that constitute 50-70 % of the small RNA present in those samples and usually are not of interest for researchers. Maximize the amount of reads mapped to relevant miRNAs.

**NEXTFLEX Custom Small RNA Blockers** selectively deplete up to 10 high-abundance sequences of your choice, ideal for non-blood and non-human sample types. The result: greater sequencing depth for the transcripts of interest for your project.

**miND® Spike-In Controls** are a mix of synthetic small RNAs added before library preparation to verify assay performance and enable absolute normalization of small RNA-seq data. Verified with a broad range of sample types including human biofluids, cells, tissues and EVs.

**RiboLace® Pro** enriches actively translating ribosomes through magnetic-bead based isolation of ribosome-protected fragments, supporting downstream small RNA-seq library preparation for translational studies and ribosome profiling.

### Selection guide

Item	Revvity solution
Small RNA library prep	NEXTFLEX Small RNA-seq Kit v4
Blocker of abundant human miRNA found in blood	NEXTFLEX Blood miRNA Blocker
Custom blockers of small RNA (e.g. rRNA, tRNA, miRNA, etc)	NEXTFLEX Custom Small RNA Blockers
Spike-ins	miND® Spike-in Controls
Isolation of active ribosomes for Ribo-Seq	RiboLace® Pro

### Get started

Contact our team to learn how **NEXTFLEX Small RNA-seq kit v4** and its accessories simplify small RNA library preparation and enable high-quality, reproducible sequencing data.



revvity