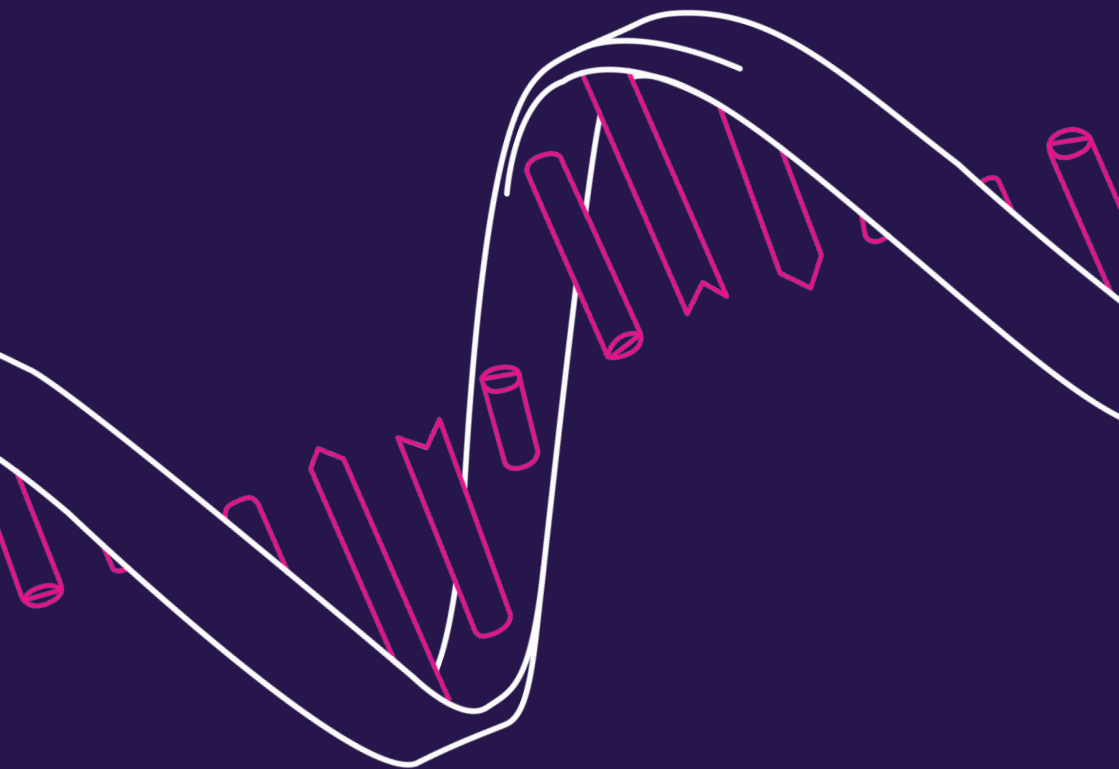


qEV RNA EXTRACTION KIT



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RNA EXTRACTION FROM EXTRACELLULAR VESICLES

Extracellular vesicle RNA (EV-RNA) is among the cargo carried and protected by EVs, alongside protein and other small molecules. Since the first identification of EV-RNA in 2007¹, functional roles for EV-RNA have been established in cell-to-cell communication, alongside reports of RNA being delivered to target cells by EVs. As EV-RNA consists of both small RNAs (e.g., miRNAs) and larger RNAs (e.g., mRNAs), EV researchers require an extraction method capable of extracting RNA of all sizes and types.

Both EV isolation and RNA extraction methods impact upon the yield and purity of extracted EV-RNA.² The qEV RNA Extraction Kit, paired with qEV columns, allows you to seamlessly standardise your EV-RNA workflow from starting sample to high yield, pure RNA.

BENEFITS OF THE qEV RNA EXTRACTION KIT

The qEV RNA Extraction Kit, produced by Norgen Biotek Corp., quickly extracts all sizes of RNA from qEV isolates. The silicon-carbide technology on which this kit is based has several advantages over traditional phenol and silica column-based extraction kits. The qEV RNA Extraction Kit:

- Isolates more miRNAs than other methods (Figure 1A)
- Isolates all RNA sizes (Figure 1B)
- Isolates RNA regardless of GC content (Figure 1C)³
- Is highly sensitive for RNA-binding and does not require carrier RNA in low RNA samples, unlike other methods
- Does not contain phenol, a hazardous chemical which can impact RNA analysis⁴
- Provides a quick approach to RNA extraction, taking only 15-20 minutes



Figure 1: Performance of the qEV RNA Extraction Kit compared with alternative methods. (A) Silicon-carbide technology in the qEV RNA Extraction Kit (blue bar) retrieves more different miRNAs from small RNA sequencing than other RNA extraction kits. (B) RNA extracted from plasma EVs (purified with qEV columns) using the qEV RNA Extraction Kit performs well in qPCR analysis of both small (e.g., miRNA) and larger (e.g., mRNA) RNAs. (C) The qEV RNA Extraction Kit better recovers microRNAs with diverse GC content than silica-based extraction kits (pink bars).

qEV RNA EXTRACTION KIT SPECIFICATIONS

SAMPLE TYPE

- Biofluids and cell conditioned culture media

SIZE OF RNA PURIFIED

- All sizes

ELUTION VOLUME

- 50-100 μ L (user can select elution volume)

DOWNSTREAM APPLICATIONS

- Compatible with a variety of downstream applications, including qPCR, arrays and RNA sequencing



REFERENCES

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