

Plasma/Serum Circulating RNA Purification Mini Kit (Slurry Format)

Norgen's Plasma/Serum Circulating RNA Purification Mini Kit (Slurry Format) provides a fast, reliable and simple procedure for isolating circulating RNA from plasma and serum samples ranging from 0.25 mL to 2 mL. Free-circulating plasma and serum RNA can serve as both tumor- and fetal-specific markers for cancer detection and prenatal diagnosis. As well, free-circulating RNAs have the potential to provide biomarkers for other disease states. Free-circulating RNA in plasma or serum are usually present as short fragments of less than 1000nt, and free-circulating miRNA (21nt) can also be found in plasma and serum. This kit is able to isolate all sizes of circulating RNA, including microRNA, without the use of phenol or chloroform.



Norgen's Plasma/Serum Circulating RNA Purification Mini Kit (Slurry Format) provides an efficient method for the purification of free-circulating RNA from plasma and serum prepared from blood collected only on either EDTA or citrate. Purification is based on the use of Norgen's proprietary resin as the separation matrix. The kit is able to isolate all sizes of circulating RNA, including microRNA. The slurry format provides an advantage over other available kits in that it does not require extension tubes for the purification of free-circulating nucleic acids from large sample volumes. RNA can be isolated from either fresh or frozen samples using this kit. The purified plasma/serum free-circulating RNA is eluted in an elution solution that is compatible with real time PCR, reverse transcription PCR, Northern blotting, RNase protection and primer extension, and expression array assays.

Kit Specifications			
Minimum Plasma/Serum Input	0.25 mL	Maximum Plasma/Serum Input	2 mL
Time to Complete Purification	< 40 minutes	Size of RNA Purified	All sizes, including microRNA

Plasma/Serum Circulating RNA Purification Kit Benefits

Isolate all sizes of circulating RNA	The kit allows for the isolation of all sizes of fragmented circulating RNA, including microRNA.
Fast and easy processing	Rapid format allows for the processing of multiple samples in 30 minutes.
Concentrate circulating RNA	Circulating RNA present in input volumes of 0.25 - 2 mL are concentrated into a final elution volume of 100 µL.
Isolate inhibitor-free RNA	Purified DNARNA can be used in a number of sensitive downstream applications including real time PCR, reverse transcription PCR, Northern blotting, RNase protection and primer extension, and expression array assays.

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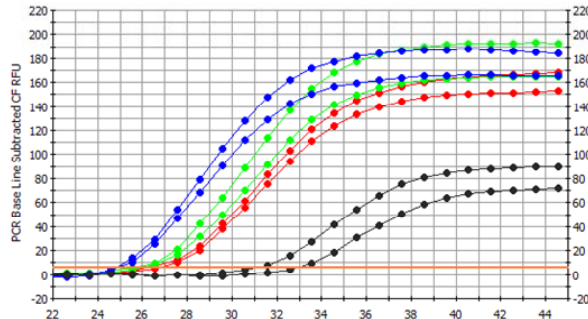


Figure 1. Isolation and Detection of Circulating RNA from Different Plasma Volumes. The kit was used to isolate circulating RNA from 0.5mL, 1mL and 2mL plasma. Three microlitres of the purified RNA was then used as the template in RT-qPCR reactions to detect the human 5S gene. The 5S housekeeping gene was detected from all plasma sample volumes used. RNA isolated from 0.5mL plasma is represented by the red line, RNA isolated from 1mL plasma is represented by the green line whereas RNA isolated from 2mL plasma is represented by the blue line. The black line corresponds to the no template control.

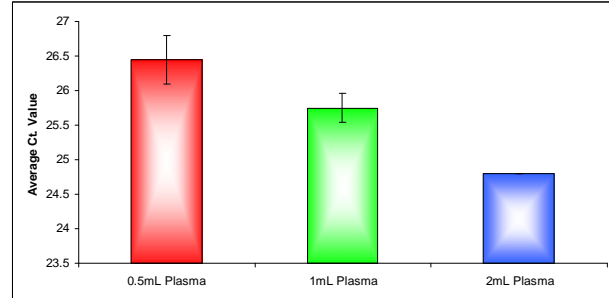


Figure 2. Effective Isolation of Plasma Circulating RNA from Different Volumes. Norgen's kit was used to isolate circulating RNA from 0.5mL, 1mL and 2mL plasma. Three microlitres of the purified RNA was then used as the template in RT-qPCR reactions to detect the human 5S gene. The 5S housekeeping gene was detected from all plasma sample volumes used. The amplification of the 5S rRNA showed an increasing amount of RNA with increasing the sample input volume. This is represented by the decrease of the Ct value with increasing the sample input volume.

Plasma/Serum Circulating RNA Purification Mini Kit (Slurry Format) Contents:

1. PS Solution A
2. PS Solution B
3. PS Solution C
4. Wash Solution
5. RNA Elution Solution
6. Mini Filter Spin Columns
7. Collection Tubes
8. Elution Tubes
9. Product Insert

Storage Conditions

All buffers should be kept tightly sealed and stored at room temperature (15-25°C) for up to 1 year without showing any reduction in performance. It is recommended to warm PS Solution A, PS Solution B and PS Solution C for 20 minutes at 60°C if any salt precipitation is observed.

Customer-Supplied Reagents and Equipment

- Centrifuge with a swinging bucket rotor capable of 2000 RPM
- Benchtop microcentrifuge
- Micropipettors
- 96 – 100% ethanol
- β - Mercaptoethanol
- 50 mL tubes
- 15 mL tubes

Shipping Conditions

The Plasma/Serum Circulating RNA Purification Mini Kit (Slurry Format) is shipped at room temperature.

Cat #	Description	Quantity
51000	Plasma / Serum Circulating RNA Purification Mini Kit (Slurry Format)	50 preps

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