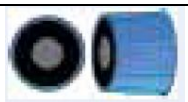
hepatomiR® - Platelet Poor Plasma Collection Protocol

Date	
Operator	
Donor IDs	

Materials	**Manufacturer:**	**Catalog Number_**
Plasma Tube Type:	_____	_____
Anticoagulant:	☐ 3.2% - 3.8% Sodium Citrate (Citrate)	☐ 3.2% CTAD (citrate–theophylline–adenosine–dipyridamole)
Color Code (Greiner):		

Procedure

☐	1.	Fill the plasma tube completely, mix by gently **inverting the tube at least 8-10 times.**
☐	2.	Plasma tubes can be incubated at room temperature for **up to 8 hours before centrifugation.**
☐	3.	Centrifuge the blood sample at **1,000 g for 10 minutes at 4°C** in a horizontal rotor (fixed-angle rotor).
☐	4.	Carefully collect supernatant without disturbing the cell pellet, and transfer to a new tube.
☐	5.	Centrifuge new tube at **10,000xg for 10 min at 4°C.**
☐	6.	Use a clean pipette and nuclease-free filter tips to carefully transfer the platelet-poor plasma into a nuclease-free/sterile plastic tube.
☐	7.	Use plasma immediately for RNA extraction, or store on dry ice or at nominal -20°C in an upright position within 30 minutes of centrifugation.
☐	8.	**Long-term storage:** store the plasma samples at nominal -80°C in an upright position within one week after collection.

Note: Never pour off plasma; pouring off plasma directly from the draw tube will introduce excess cells to the specimen. To remove plasma, start from the top, gently draw specimen into pipette as you go further down tube. Leaving approximately 0.5 mL of plasma will ensure that you do not disturb the buffy coat and cell layer.

Scientific Literature:

Mussbacher, M.; Krammer, T.L.; Heber, S.; Schrottmaier, W.C.; Zeibig, S.; Holthoff, H.-P.; Pereyra, D.; Starlinger, P.; Hackl, M.; Assinger, A. Impact of Anticoagulation and Sample Processing on the Quantification of Human Blood-Derived microRNA Signatures. Cells 2020, 9, 1915. https://doi.org/10.3390/cells9081915

Mussbacher M, Schrottmaier WC, Salzmann M, Brostjan C, Schmid JA, et al. (2017) Optimized plasma preparation is essential to monitor platelet-stored molecules in humans. PLOS ONE 12(12): e0188921. https://doi.org/10.1371/journal.pone.0188921

Starlinger, P., Hackl, H., Pereyra, D., Skalicky, S., Geiger, E., Finsterbusch, M., Tamandl, D., Brostjan, C., Grünberger, T., Hackl, M. and Assinger, A. (2019), Predicting Postoperative Liver Dysfunction Based on Blood-Derived MicroRNA Signatures. Hepatology, 69: 2636-2651. https://doi.org/10.1002/hep.30572