Fact Sheet – thrombomiR® test

1. Who is the target audience for thrombomiR®?
   - Cardiologists, Hematologists,
   - Doctors who are monitoring the effect of anti-platelet drugs (or any drug type) on platelet reactivity
   - Everyone else in a hospital who needs information about platelet function or management of antiplatelet therapy before and after surgical interventions
   - Scientific groups dealing with basic and clinical research on platelet function

2. What is thrombomiR®?

The thrombomiR® test enables quantitative analysis of 10 platelet microRNAs, 1 liver-specific microRNA (control) and 5 assay and sample quality controls in human platelet-poor plasma (PPP) samples. These microRNAs are novel biomarkers, that can inform about the molecular function of platelets in vivo, determine the effect of a treatment on platelet reactivity, and study the utility of platelet microRNAs as risk factors for cardiovascular and metabolic diseases. In contrast to commonly used platelet function tests e.g. LTA, VerifyNow® or PFA-100®, the thrombomiR® kit enables an in vivo measure of platelet function, independently of the activation pathway.

3. For which patients is the thrombomiR® test suitable?
   - Monitor the effect of anti-platelet drugs (or any drug type) on platelet reactivity
   - Diagnosis of platelet-related disorders
   - Assessment of risk for cardiovascular events
   - For early diagnosis and prognosis of diabetic retinopathy
   - Management of antiplatelet therapy before and after surgical interventions

4. What exactly is the thrombomiR® test kit?

The thrombomiR® test is an RT-qPCR assay, which enables quantitative analysis of circulating microRNAs in human PPP samples.

Each kit comprises the following components:

1. Plasma RNA extraction kit containing all reagents, spin columns and collection tubes to extract RNA from PPP samples required for thrombomiR®;
2. The RT-qPCR chemistry comprising spike-in controls, all reagents for cDNA synthesis and the miGreen PCR Mix;
3. Primer-coated qPCR plates in 96 well or 384 well format

8. How many samples can we measure with one thrombomiR® kit?

One kit is suitable for analysis of up to 48 samples.

9. Does the thrombomiR® kit require a specific instrument or can it be run with any qPCR instrument?

A wide range of qPCR cyclers equipped with 96 well/384 well-blocks are compatible with thrombomiR® plates. On our homepage you find a list of compatible qPCR cyclers, for which we can have suitable plates manufactured.

10. Advantages of thrombomiR® kit?
    - works with fresh or frozen samples (-80°C for long-term stability)
    - measures reactivity via several pathways simultaneously (ADP, AA, Collagen, TXA2), independently of the activation pathway
    - measures a platelet signal generated in-vivo

11. Sample requirements for thrombomiR® kit
    - Sample type: human PPP, on our homepage you find the protocol for obtaining PPP from whole blood
    - Sample volume: 50-200 µl human PPP/ 25 - 50 µl rodent PPP
    - Sample stability:
        - Blood can be stored 6 hours at room temperature before centrifugation.
        - After centrifugation plasma should be frozen if the analysis is not performed right away. -20°C for up to 4 weeks. -80°C for long-term storage.
    - Shipment: frozen shipment on dry ice is required