

FlexmiR™ MicroRNA Control Set
For Research Use Only. Not for use in diagnostic procedures.

Summary and Intended Use

The FlexmiR MicroRNA Control Set is used in conjunction with the FlexmiR microRNA labeling kit and panels for microRNA (miRNA) expression analysis. The FlexmiR MicroRNA Control Set includes two mixtures of five synthetic RNA oligonucleotides. One mixture is biotinylated (Biotinylated Control) and the other mixture is not (Non-Biotinylated Control).

The Non-Biotinylated Control is provided to spike into the unlabeled total RNA sample to verify the integrity of the labeling protocol as well as the panel protocol. It also provides a reference from which to normalize results between different samples. The Non-Biotinylated Control is also useful for normalizing results within samples (for details, see the instruction manual for the FlexmiR MicroRNA Human Panel or the FlexmiR MicroRNA Mouse/Rat Extension Panel).

The Biotinylated Control is provided as a stand-alone verification that the FlexmiR microRNA panel is performing as expected without the variable of the biotinylation labeling. It may also be used to spike into the biotin-labeled total RNA sample post-labeling to verify the integrity of the assay. The Biotinylated Control is also useful for becoming familiar with the assay or troubleshooting the assay without using precious RNA sample.

Control Set Contents

The FlexmiR MicroRNA Control Set (part number BG-FMIR-C20) consists of 3 components:

Kit Component	Amount supplied	Cap color
Non-Biotinylated Control	100 hybridizations	Green
Biotinylated Control	100 hybridizations	Red
Nuclease-free water	1 mL	White

Safety Precautions

Although this product does not contain hazardous or carcinogenic components at toxic levels, it may be toxic if swallowed. If product comes in contact with skin, remove contaminated clothing and wash with soap and water. In case of accidents or if you feel unwell seek medical advice immediately and show this product label to your medical provider. Material Safety Data Sheet available upon request. Use standard lab practices for handling and storage of RNA to prevent RNase contamination or degradation.

Limitations

Both controls are specific to the probes attached to the microspheres in regions 83-87 of all microsphere pools included in the FlexmiR MicroRNA Human Panel and FlexmiR MicroRNA Mouse/Rat Extension Panel and cannot be used together. Therefore, only one control, either the Biotinylated Control or the Non-Biotinylated Control, may be used per well.

The Median Fluorescent Intensities (MFIs) obtained from the Biotinylated and Non-Biotinylated controls used at the recommended concentrations cannot be assumed to be directly comparable. Therefore, a comparison of the MFIs from the two controls cannot be used to assess the efficiency of the labeling reaction.

Product Storage

The FlexmiR MicroRNA Control Set ships frozen. Upon receipt, the lyophilized Non-Biotinylated and Biotinylated Controls should be stored at -10 to -30 °C. Reconstituted controls should be stored at -80 °C in aliquots to avoid multiple freeze-thaw cycles.

Protocol

Purpose	Recommended protocol
Non-Biotinylated Control (GREEN CAP)	
To verify both labeling and panel protocols with total RNA samples	<ol style="list-style-type: none"> Resuspend lyophilate in 44 µL nuclease-free water. Add 2 µL to each FlexmiR microRNA labeling reaction as described in the FlexmiR MicroRNA Labeling Kit manual.
Biotinylated Control (RED CAP)	
To verify panel protocol only with total RNA samples	<ol style="list-style-type: none"> Resuspend lyophilate in 44 µL nuclease-free water. Add 2 µL to each FlexmiR microRNA labeling reaction post-labeling. Perform the protocol described in the instruction manuals for the FlexmiR microRNA panels.
To troubleshoot assay or to use for assay training	<ol style="list-style-type: none"> Resuspend lyophilate in 44 µL nuclease-free water. Dilute an appropriate volume 1:50 in nuclease-free water. Add 20 µL of the diluted control to each of the wells of microspheres that are being used for assay set-up or troubleshooting. The control is added instead of labeled sample RNA in step 9 of the hybridization protocol in the instruction manuals for the FlexmiR MicroRNA panels.

Luminex Corporation
 12212 Technology Blvd.
 Austin, TX 78727
 United States
 512.219.8020

www.luminexcorp.com/microRNA
FlexmiR@luminexcorp.com

For Technical Support:
 877-785-2323 (U.S. and Canada)
 +1 512-381-4397 (International)
support@luminexcorp.com