BioVendor Group miRNA

ENG

Instructions for use:

Cel-miR-54-3p-TT-Synthetic

Catalogue number:

TTK00000253

For research use only!

BioVendor R&D®

BioVendor – Laboratorní medicína a.s.
Karásek 1767/1, 621 00 Brno, Czech Republic
+420 549 124 185
info@biovendor.com
sales@biovendor.com
www.biovendor.com

CONTENT

1. DESCRIPTION

This product data sheet is valid for preparation of cel-miR-54-3p-TT-Synthetic.

2. STORAGE, EXPIRATION

Store the dried Synthetic microRNA at -20 °C. Under these conditions, the Synthetic microRNA is stable until the expiration date (see label on the vial).

3. PREPARATION OF REAGENTS

Refer to the Certificate of Analysis (CoA) for current volume of nuclease-free water (not included) needed for reconstitution of cel-miR-54-3p-TT-Synthetic.

Reconstitute the dried cel-miR-54-3p-TT-Synthetic with nuclease-free water just prior to the assay. Let it dissolve at least 15 minutes with occasional shaking. **Mix well**. Vortex is recommended.

Dilute reconstituted cel-miR-54-TT-Synthetic **100x** with nuclease-free water, e.g., 10 µl of reconstituted cel-miR-54-TT-Synthetic + 990 µl nuclease-free water.

The final concentration of diluted cel-miR-54-TT-Synthetic is **$1x10^9$ microRNA copies/µl**.

Stability and storage:

Use immediately. **Do not store** the reconstituted and/or diluted cel-miR-54-TT-Synthetic**.**

4. SPIKE-IN CONTROL

Preparation of cel-miR-54-TT-Synthetic spike-in solution to monitor the RNA isolation efficiency

The recommended concentration of the cel-miR-54-3p-TT-Synthetic spike-in solution is **$1x10^7$ microRNA copies/µl**, assuming the elution volume of 20 µl. When using different elution volumes, the concentration of cel-miR-54-3p-TT Synthetic spike-in solution has to be adjusted to obtain the same results.

Notice: The concentration of the cel-miR-54-3p-TT-Synthetic spike-in solution can be changed based on the customer's experiences.

Protocol to monitor the RNA isolation by using the cel-miR-54-3p-TT-Synthetic

1) Mix 1 µl of cel-miR-54-3p-TT-Synthetic spike-in solution per 1 volume of the lysis buffer to be used for the isolation of one sample. Prepare a mixture sufficient for all isolations including a 10% surplus.

2) Use this mixture to lyse the samples. Immediately after adding the lysis mixture to the sample, mix samples by vortexing to prevent exposure of spike-ins to the endogenous RNases.

3) Perform isolation procedures as recommended by the manufacturer.

Notice: Never mix cel-miR-54-3p-TT-Synthetic spike-in solution directly with biological samples as it can be degraded by nucleases presented in samples.

5. ISOLATION QUALITY CONTROL

Perform the TT-qPCR assay and compare the Cq values of the cel-miR-54-3p-TT-Synthetic between samples. Since this cel-miR-54-3p-TT-Synthetic was added in the same amount per isolation and the same volume of RNA eluate was used for cDNA synthesis of all samples, the Cq values should be comparable between the samples. If so, their isolation efficiency was similar.

If the Cq values of cel-miR-54-3p-TT-Synthetic of some samples deviate considerably from the rest of the samples (e.g., they have higher Cq by 3 or more), it is an indication of a technical problem during the workflow. Either the RNA isolation had lower efficiency than the rest of the samples, or the enzymatic reactions (reverse transcription and PCR amplification) were inhibited.

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