

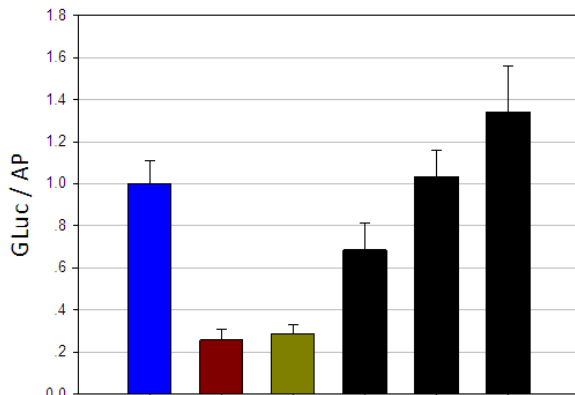
miArrest™ miRNA Inhibitors

Potent and long-lasting miRNA inhibitors provide robust knockdown of miRNA in virtually all cell types.

Vector-based lentiviral and non-viral clones or synthetic oligonucleotides

- Achieve stable or transient transfection
- Detect knockdown easily with mCherry reporter gene
- Study miRNA loss-of-function confidently

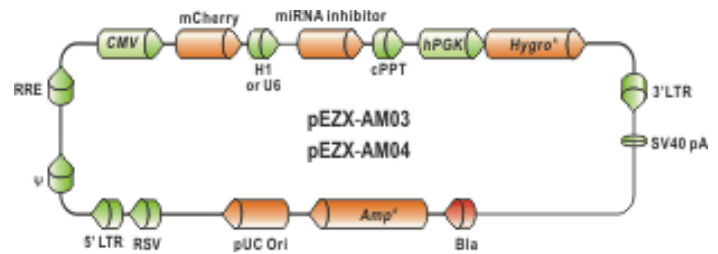
Vector-based inhibitor against miR-125a



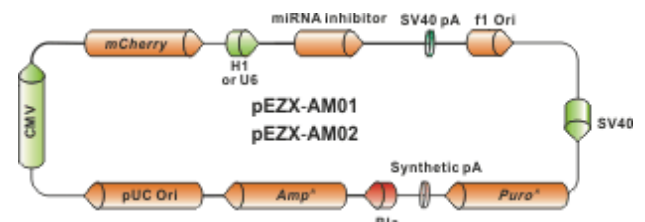
Gluc-L IN28-3' UTR	+	+	+	+	+
miR-125a	+	+	+	+	+
NC-Inhibitor	-	+	-	-	-
Anti-miR-125a (ng)	-	-	20	50	100

Figure 1. Data showing the effect of miBlock miRNA inhibitor clone in a dose-dependent manner. A miR-125a inhibitor expression plasmid (GeneCopoeia HmiR-AN0094-AM01) was transfected into HEK 293 cells with 1) a miR-125a precursor expression plasmid (GeneCopoeia HmiR0309-MR03) and 2) a miRNA target sequence expression clone expressing LIN28, a known target gene for miR-125a (GeneCopoeia HmiT019205-MT02: 3'-UTR sequence of LIN28 in gaussia luciferase-alkaline phosphatase dual reporter expression vector). Both the GLuc activity and an internal control AP activity were determined 24 hours post-transfection. The activity ratio of GLuc to AP was set to 1 for the single transfection sample with LIN28 3'-UTR target sequence expression clone (left-most bar), against which the activities of other samples were normalized. The result shows that miR-125a suppressed the luciferase activity from the Gluc-LIN28-3'-UTR clone by more than 70% (Bar 2 from left). This suppression effect was blocked by the introduction of varying amount of miBlock™ inhibitor clone against miR-125a in a dose-dependent manner. At the highest dose, the reporter GLuc activity is higher than the control (right-most bar). This could be attributed to the fact that this vector-based inhibitor may have blocked the regulatory effect of endogenous miR-125a, which would result in increased translational activity of GLuc-LIN28-3'-UTR transcript.

HIV-based lentiviral vector backbone



Non-viral vector backbone



Advantages

- All known human, mouse and rat miRNA
- Synthetic oligonucleotides chemically enhanced to improve longevity and efficiency
- Lentiviral backbone facilitates easy delivery into non-dividing and hard-to-transfect cells
- Well tested, high quality and cost effective

Also available for miRNA studies

- miExpress™ miRNA precursor expression clones
- miTarget™ 3'UTR miRNA target sequence clones
- All-in-One™ qPCR validated miRNA primers
- All-in-One™ qRT-PCR miRNA Detection kits

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Tel: +91-11-42208000 / +91-9810521400

Email: customerservice@lifetechindia.com

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