



Chemically Modified miRNA Inhibitor

User's Instruction

Description

Chemically Modified miRNA Inhibitor is used to inhibit the function of endogenous miRNA. Specific Chemically Modified miRNA Inhibitor can be introduced into cells expressing specific miRNA to inhibit the effect of miRNA, and can also be used to inhibit the expression of reporter vectors expressing specific endogenous miRNA.

Features

- Compared with the common miRNA Inhibitors, Chemically Modified miRNA Inhibitor shows higher affinity to the cell membrane, thus the amount of transfection reagent required in cell transfection experiments is significantly reduced.
- It is particularly suitable for interference experiments in animals. Moreover, it has higher stability and inhibitory effect in *in vivo* experiments, and can be used in many ways such as systemic injection or local injection with easy operation.
- Can be enriched in target cells to achieve high specific and stable interference.
- Active for at least a week and may even extend to 5-6 weeks.

Applications

- Use Chemically Modified miRNA Inhibitor to inhibit miRNA *in vivo* to study loss-of-function effect
- Screening for miRNAs that regulate gene expression and influence cellular developmental processes
- Study the role of miRNA in biological processes, such as cell development, proliferation, differentiation and apoptosis
- Discovery and validation of endogenous miRNA targets



Protocol

The transfection efficiency is different for different cell lines and different transfection reagents. The optimal transfection concentration needs to be determined by experiments. We found that the best concentration range in the typical test is 15-100 nM, but the concentration range for optimization shall be set between 1-100 nM.

	96 Well Plate	24 Well Plate	12 Well Plate
Transfection Reagent	0.3-1.0 μ l	1-3 μ l	2-4 μ l
Chemically Modified miRNA Inhibitor	3 pmol	15 pmol	30 pmol
Cell Density	6,000 cells/well	40,000 cells/well	80,000 cells/well
Final Volume/Well	0.1 ml	0.5 ml	1.0 ml

Note:

- The recommended amount of transfection reagent should be adjusted according to the reagent you are using.
- We recommend you to optimize the amount of Chemically Modified miRNA Inhibitor according to your cell type.
- The cell density value depends on the cell size and growth. General we recommend cell confluency at 30-70%.

Optimization

Optimization of transfection efficiency is one of the most critical factors to maximize the activity of Chemically Modified miRNA Inhibitor. For each transfection reagent, the transfection efficiency can be optimized mainly from the following aspects:

- Quantity of transfection reagent
- Quantity of Chemically Modified miRNA Inhibitor
- Cell density at transfection



- Operation sequence of transfection
- Contact time of cells with transfection reagent-siRNA complex