



MIRacle™ Antagomir

Product Manual



Antagomir Product Information Sheet

Quality Control	
PAGE	MicroRNA Antagomir is a single-stranded miRNA antagomir with accurate molecular weight and special chemical modification inhibiting miRNAs from functioning.
HPLC Purification	HPLC purification and analysis of single-stranded miRNA antagomir. Purity >95%
Attention	During the operation of RNA oligo, if there is exogenous nuclease, RNA oligo is prone to degradation. In the relevant test, please wear gloves to operate, try not to use RNase contaminated reagents, test tubes, pipettes and tips. Store in -20°C or -80°C environment as soon as possible after receiving the product
Resuspension	<p>Centrifuge the EP tube at low speed with a maximum speed of 4,000 x g to allow the miRNA antagomir to gather at the bottom of the tube.</p> <ol style="list-style-type: none"> 1. Gently open the tube cover. 2. At 1 OD, add 250 µL of DEPC water to make a 20 µM stock solution 3. Gently pipette the stock solution 5 times with a pipette 4. Dispense according to specific dosage to avoid multiple freeze-thaw cycles 5. Pay attention to seal the EP tube when re-storing 6. Store at -80°C for use

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MicroRNA Antagomir Product

Description

Antagomir is a single-stranded small RNA specially designed and chemically modified according to the mature sequence of microRNA. It is a high-efficiency blocker specifically used to inhibit endogenous microRNA. The specific MicroRNA antagomir can be introduced into cells expressing specific microRNA to inhibit the effect of microRNA, and can also be used to suppress the expression of a reporter vector expressing specific endogenous miRNA.

Suppress specific endogenous miRNA

To analyze the effect of miRNA on biological processes and endogenous targets, miRNA antagomir can be transfected into cells to evaluate whether this effect can be reversed.

Transfection Procedure

Transfection efficiency is different for different cell lines and different transfection reagents. We recommend that the final concentration of miRNA antagomir is 15-100 nM. The optimal transfection concentration still needs to be determined through experiments. We found that the optimal concentration range in a typical experiment is 15-100 nM, but the optimized concentration range can be widened to 1-100 nM.

	96 well plate	24 well plate	12 well plate
Transfect reagent	0.2-0.5 μ L	0.5-1 μ L	0.5-2 μ L
MicroRNA antagomir	3 pmol	15 pmol	30 pmol
Cell density	6000 cells/well	40000 cells/well	80000 cells/well
Final volume per well	0.1 mL	0.5 mL	1.0 mL

A: The recommended amount of transfection reagent should be adjusted appropriately according to the reagent you ordered;

B: The added amount shown is the final concentration of miRNA antagomir at 30 nM. Since the amount of maximum miRNA antagomir activity varies among different cell types, it is recommended that you optimize it yourself;

C: Cell density is only a recommended value. There are certain changes in different cell lines, mainly depending on the size and growth of the cell. Generally speaking, we recommend that the cell fusion degree is 30-70%.

Transfection Optimization

Optimization of transfection efficiency is one of the most important factors to maximize the activity of miRNA antagomir. For each transfection reagent, you should first determine the most appropriate transfection reagent, mainly depends on the following aspects:

- Amount of transfection reagent
- Amount of MicroRNA antagomir

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- Cell density during transfection
- Operation sequence during transfection
- Cells and transfection reagent/siRNA complex contact time

Antagomir is generally needed to study the function of miRNA in vivo. Their dosage varies greatly depending on the mode of administration. Generally, refer to the dosing regimen as follows:

miRNA agomir/antagomir system

Recommended dosage per dose:

Antagomir 5-80µg/g body weight;

Dosage per mouse (body weight 15-20g):

Antagomir 200nmol (Generally need 3 injections)

The route of administration to reach the target site effectively:

Intravenous administration (6-week-old mice, 45-150 µg, continuous injection for 3 days, 24 hours after the last injection) is suitable for heart, liver, kidney, lung, tumor tissues, and other tissues with rich blood flow.

Respiratory administration: suitable for the respiratory system.

Intraperitoneal administration: suitable for internal organs of the abdominal cavity and pelvis, pancreas, spleen, kidney, ovary, etc.

Intracranial administration: suitable for central nervous system research.

Local administration:

Sites difficult to reach with systemic administration, such as epidermis, subcutaneous (tumor), uterine cavity, etc. Xenograft nude mouse model, tumor Intra-injection, multi-point injection of 15µg, continuous 2-4 weeks, 2 times a week, 2-4 weeks after the first injection.

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