

in vivo DNA RNA Advanced Transfection Reagent

(AV50)

1. Description

in vivo DNA RNA Advanced Transfection Reagent can be injected intravenously or by local tissue injection in vivo. Further more, total injection volume is very small, dense tissue can be transfected by microinjection and the time of circulation in vivo is long. Both DNA, siRNA and co-transfection can be carried out.

2. General Considerations

1> DNA quality requirements

Concentration: 300 ng/ul - 2 µg/ul;

Solution: dissolved in ddH₂O or ultra-pure water;

Endotoxin: removed

2> RNA quality requirements

Concentration: 20 µM, 40 µM, 60 µM, 80 µM

3. General Protocol for in vivo Transfection

1> Complex preparation: Nucleic acid was directly mixed with transfection reagent according to 1:1 relationship. Then use a pipette to blow up 10-15 times to mix. After incubating at room temperature for 10-15 minutes, complex would be prepared. During the procedure, no liquid residue was ensured on the wall of tube.

2> Intravenous injection or local tissue injection of prepared complex can be proceeded with a syringe or microinjection needle.

3> 3 or 5 days after injection, efficiency of transfection would reach the peak, and expression of target gene could be detected then.

Injection dosage during in vivo transfection

Animal	Injection method	Maximum injection volume(ul)	DNA dosage(ug)	siRNA dosage(ul)	Transfection reagent dosage(ul)
Neonatal mouse	Intraventricular injection	2	1	1	1
Nude mouse	Tail vein injection	400	62	62	62
	Intratumoral injection	50	17	17	17
Adult mouse	Tail vein injection	400	62	62	62
	Intraperitoneal injection	800	100	100	100
	Intraventricular injection	5	2.5	2.5	2.5
	Intratumoral injection	50	17	17	17
Adult rat	Tail vein injection	2000	505	505	505
	Intraventricular injection	25	15	15	15

4. Important Guidelines

1> The ratio of DNA (μg) or 20 μM siRNA (μl) to transfection reagent (μl) should be 1:1.

2> The volume of siRNA used in above table is specific for siRNA of 20 μM . If the concentration of siRNA is 40 μM , the volume of siRNA in above table should be halved. If the concentration of siRNA is 80 μM , the volume of siRNA in above table should be divided by 4, and so on.

3> When local tissue injection is performed, the amount of the complex should be 5-10 $\mu\text{l}/\text{cm}^2$.

4> In co-transfection experiment, the total amount of nucleic acid in above table remains the same, the proportion of various nucleic acids could be adjusted according to experimental requirements, then nucleic acids can be mixed with transfection reagent sufficiently.

5> In the specific experimental operation, the dosage of nucleic acid and transfection reagent can be adjusted according to the "maximum injection volume" in the table above.

5. Order Information

Product	Catalog	Size
in vivo DNA RNA Advanced Transfection Reagent	AV500025	0.25 ml
in vivo DNA RNA Advanced Transfection Reagent	AV500050	0.50 ml
in vivo DNA RNA Advanced Transfection Reagent	AV500075	0.75 ml
in vivo DNA RNA Advanced Transfection Reagent	AV500150	1.50 ml
in vivo DNA RNA Advanced Transfection Reagent	AV500500	5.00 ml
in vivo DNA RNA Advanced Transfection Reagent	AV501000	10.00 ml