

Entranster™ –in vivo Transfection Reagent

For in vivo gene delivery

Cat. No. 18668-11 **Size: 1.0ml**
Store at +4°C

Description

Engreen Biosystem Co,Ltd. is a professional R&D manufacturer of transfection reagents. Entranster™-in vivo is a nano-polymer transfection reagent, synthesized by Engreen Biosystem Co. Ltd.

Entranster™-in vivo is a patent-pending, animal-origin free formulation for effective and reproducible in vivo gene and oligonucleotide delivery with low toxicity providing the following advantages:

- Non-viral vector for gene transfer.
- The simplest and safest approach to delivery gene in vivo.
- No detectable inflammatory response.

Important Guidelines for Transfection

- Entranster™-in vivo can be used in gene therapy, RNA interference, protein function studies and genetic vaccination. **For research use only. Not suitable for use in humans.**
- We recommend using DNA prepared in water.
- We recommend using a 10% sterile isotonic glucose solution (w/v) to dilute Entranster™- in vivo transfection reagent and DNA.

Amount of DNA and injection volume.

The amount of DNA delivered is determined in part by the application, animal model, target organ and route of injection. Suggestions for experiments in mice are given in Table 1. In order to prevent precipitation of in Entranster™-in vivo /DNA complexes, the final concentration of DNA in the final volume should not exceed 0.5 µg/µl. We recommend using DNA prepared in water. Prior to injections, ensure that in Entranster™-in vivo and glucose are at room temperature.

Table 1 Recommended amounts of DNA for gene delivery in mice depending on the injection route.

Animal	Site of injection	Suggested amount of DNA	Maximum injection volume
Adult mouse	Tail vein	50µg	200µl-400µl
	Brain ventricle	2.5-1µg	5µl

	Intraperitoneal	100µg	0.6ml-1ml
	Subcutaneous tumor	10-50µg	100µl

Optimizing Transfection

The ratio of Entranster™-in vivo /DNA is crucial. Optimize transfection conditions by varying DNA and Entranster™-in vivo concentrations. Test 10-100µg DNA and 10-300 µl Entranster™-in vivo for subcutaneous tumor in adult mouse. (Table 2).

Table 2 Optimize transfection conditions by varying DNA and Entranster™-in vivo concentrations.

DNA(µg)	Entranster™-in vivo(µl)			
10µg	10µl	15µl	20µl	30µl
50µg	50µl	75µl	100µl	150µl
100µg	100µl	150µl	200µl	300µl

Transfection Procedure

The following protocol is given for intravenous injection in the mouse tail vein in a final volume of 400 µl. Prior to injecting the mixture, ensure that the components are at room temperature.

1. Preparation of the complexes with 10% glucose stock solution.

The preparation of the Entranster™-in vivo/DNA complexes should be performed under sterile conditions:

- a. Dilute 50 µg of DNA into 100 µl of 10% glucose. Adjust the volume to 200 µl with sterile water to obtain a final concentration of 5% glucose. Vortex gently and centrifuge briefly.
 - b. Dilute 100 µl of Entranster™-in vivo in 100 µl of 10% glucose. Vortex gently and spin down briefly.
 - c. Add 200 µl Entranster™-in vivo to 200 µl DNA at once. Briefly vortex the solution immediately and spin down. Incubate for 15 minutes at room temperature. The complexes are stable for 24 h.
2. Perform injections into animals.
 3. Monitor transgene expression as required at the appropriate time point. Robust gene delivery and expression may require 12-48 h, depending on the method of injection and the target organ.

Troubleshooting

Trouble	Comments and Suggestions
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Low gene delivery	<ul style="list-style-type: none"> • Optimize the amount of plasmid DNA used in the transfection assay. • Optimize the injection volume. • Optimize the Entranster™-in vivo /DNA ratio.
Mortality	<ul style="list-style-type: none"> • Decrease the amount of plasmid DNA used in keeping the Entranster™-in vivo /DNA ratio constant. • Decrease the Entranster™-in vivo /DNA ratio, keeping the amount of DNA constant. • Make sure the plasmid preparation is endotoxin-free and prepared in water.

Storage and stability

- Entranster™-in vivo Reagent is shipped at room temperature.
- Entranster™-in vivo Transfection Reagent is stabilized for extended storage at +2 to +8°C through the expiration date printed on the label (one year from the date of manufacture) when very tightly closed.

Related products

Entranster™-H: Transfect DNA into HEK293、Hela and CHO cells.

Entranster™-R: Transfect siRNA into animal cells.

Enfector™: Transfect DNA into animal cells.

Notice to Purchaser

Purchaser represents and warrants that Entranster™-in vivo Transfection Reagent will be used only for research purposes. Transfected cells, materials produced, and any data derived from the use of Entranster™-in vivo Transfection Reagent, may be used only for the internal research of Purchaser whether Purchaser is a “for-profit” or a “non-profit” organization. Under no circumstances may Entranster™-in vivo Transfection Reagent be used by Purchaser or any third party for a commercial purpose unless Purchaser has negotiated a license for commercial use with Engreen Biosystem (contact information: License@Engreen.com.cn). For purposes of the foregoing sentence, “commercial purpose” shall mean use of Entranster™-in vivo Transfection Reagent for profit or commercial gain. By using Entranster™-in vivo Transfection Reagent, Purchaser agrees to be bound by the above terms. If Purchaser wishes not to be bound by these terms, Purchaser agrees to return the Entranster™-in vivo Transfection Reagent to Engreen Biosystem for a full refund.

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Engreen Biosystem

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