Sunma

Sofast® Transfection Reagent in vivo Protocol

1. Description

Sofast® is new generation cationic polymer gene transfection reagent.. Sofast® is suitable for transfection of nucleic acids into eukaryotic cells, both in vitro and in vivo gene delivery. Use of Sofast® shows high transfection effeciency , low cytotoxicity and simple procedure ， it is not cleared by plasma, Sofast® shows more advantages in vivo gene delivery compared to viral vector and cationci lipids.

2. Package and storage

Sofast® is provided in liquid form at a concentration of 5mg/ml.

Sofast® is shipped at room temperature and should be stored at 4℃ upon arrival. It is stable for one year at 4℃. Shake gently before use.

3. Transfection procedure (for injection of adult mouse tail vein)

3.1 Dilute 50 μg of DNA into 200 μl of 5% glucose (w/v), mix gently.

3.2 Dilute 7.5 μl Sofast® reagent into 200μl of 5% glucose (w/v),mix gently.

3.3 Add 200ul Sofast® solution to 200ul DNA solution drop while with vortex.

Notes：The order of mixing two solutions is very improtant for gene transfection results. Do not reverse the order.

3.4 Incubate for 15-20 minutes at room temperature.

3.5 Inject animals

3.6 Monitor aimed gene expression in desired time. Gene delivery and expression may require 12-48 hours.

Table 1. Recommended amounts of DNA and Sofast® according to the route of injection

Animal	Site of injection	Amount of DNA （ug）	Volume of Sofast® （ul）	Maximum injection volume （ul）
Adult mouse	Tail vein	50	7-8	200-400
	Portal vein	50	7-8	1000
	Brain ventricule	2.5	0.2-0.3	5
	Heart	50	7-8	200
	Subcutaneous tumor	10	1.2-1.8	100
New born mouse	Brain ventricule	1	0.1-0.15	2

4. Trouble shooting

Problems	suggestions
Too low transfection efficiency	1. Use optimal amount of plasmid 2. Usehigh quality plasimd,free of RNA (OD260/280>1.8). 3. Optimize the Sofast®/DNA ratio：from 1ul Sofast®/10ug DNA to 2ul Sofast Sofast®/10ug DNA.
Animal death	1. Decrease the amount of plasmid (Keep Sofast®/DNA ratio constant) 2. Make sure the plasmid is free of endotoxin.