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ScreenFectTMA plus Quick Protocol



For support, please visit the http://screenfect.jp

ScreenFect™A plus Transfection Protocol

The optimal condition for successful transfection varies. Start any new transfection by testing the recommended two concentrations of ScreenFectTMA plus Reagent to determine an optimum amount.

1-Step method (Reverse transfection method)

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	Timeline	Steps		Procedure Details			
1	Reagent Dilution Buffer	Dilute ScreenFect [™] A <i>plus</i> Reagent ^{※1} in Dilution Buffer, and then mix well ※1 Vortex the reagent before use	Component	96-well	24-well	12-well	6-well
			Dilution Buffer for ScreenFect™A <i>plus</i>	5 μL	25 μL	50 μL	125 μL
			DNA : Transfection Reagent ratio	1:3 1:4	1:3 1:4	1:3 1:4	1:3 1:4
			ScreenFect™A plus Transfection Reagent	0.15 μL 0.2 μL	0.75 μL 1.0 μL	1.5 μL 2.0 μL	3.75μL 5.0 μL
	Plasmid DNA Dilution Buffer	Dilute DNA in Dilution Buffer, and then mix well	Dilution Buffer for ScreenFect™A <i>plus</i>	5 μL	25 μL	50 μL	125 μL
			DNA (0.1-2.5 μg / μL)	50 ng	250 ng	500 ng	1250 ng
2	DNA-lipid complex	Add diluted DNA to diluted ScreenFect™A plus Reagent, and then incubate for 5 minutes ~ at room	Diluted DNA	5 μL	25 μL	50 μL	125 μL
		temperature ^{*2} *2 Incubation is available until the step 4 has been completed	Diluted ScreenFect™A <i>plus</i> Transfection Reagent	5 μL	25 μL	50 μL	125 μL
Day 0	Cultured cells	Prepare required cells for transfection	Adherent cells or suspension cells	1.0-4.0 × 10 ⁴	0.5-2.0 × 10 ⁵	1.0-4.0 × 10 ⁵	0.25-1.0 × 10 ⁶
4	Cell suspension	Detach cells and prepare the cell suspension, and then transfer the required numbers of cell suspension to cell culture plate	Cell Detachment (Trypsin or <i>Accutase</i> ®)				
5	DNA-lipid complex	Add DNA-lipid complex from step 2 to well of cell culture plate from step 4	Final composition [per well]	96-well	24-well	12-well	6-well
			DNA-lipid complex	10 μL	50 μL	100 μL	250 μL
			DNA amount	50 ng	250 ng	500 ng	1250 ng
			ScreenFect™A plus Transfection Reagent used	0.15 or 0.2 μL	0.75 or 1.0 μL	1.5 or 2.0 μL	3.75 or 5.0 μL
			Medium volume	100 μL	500 μL	1000 μL	2000 μL
6 7 2	i d	Visualize/analyze transfected cells	Incubate cells for 1 day ~ at 37°C. Then, analys	ze transfected cells.			

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2-Step method (Forward transfection method) Timeline Steps **Procedure Details** 96-well 24-well 12-well 6-well Seed cells to be 70-90% confluent at transfection Adherent cells or suspension cells $1.0-4.0 \times 10^4$ $0.5-2.0 \times 10^{5}$ $1.0-4.0 \times 10^{5}$ $0.25-1.0 \times 10^{6}$ Seed cells to be 70-90% confluent at transfection. The medium replacement may improve a transfection efficiency in a 2-Step Pre-Cultured cells method. Dilute ScreenFect™A plus Reagent^{※1} in Dilution Buffer for ScreenFect™A plus 5 μL $25 \mu L$ 50 μL 125 µL Reagent Dilution Buffer, and then mix well ★1 Vortex the reagent before use 1:4 **DNA: Transfection Reagent ratio** 1:3 1:3 1:4 1:3 1:4 1:3 1:4 Dilution Buffer ScreenFect[™]A *plus* Transfection Reagent 0.2 μL $0.75 \, \mu L$ $5.0 \, \mu L$ $0.15 \,\mu L$ 1.0 µL $1.5 \mu L$ $2.0 \,\mu L$ $3.75 \mu L$ 2 Dilute DNA in Dilution Buffer, and then Dilution Buffer for ScreenFect™A plus 5 μL $25 \mu L$ $50 \mu L$ 125 µL mix well DNA $(0.1-2.5 \, \mu g / \mu L)$ 250 ng 500 ng 1250 ng 50 ng Add diluted DNA to diluted Diluted DNA 5 μL $25 \mu L$ 50 μL 125 µL ScreenFect™A plus Reagent, and then incubate for 5 minutes ~ at room temperature**2 Diluted ScreenFect[™]A *plus* Transfection X2 Incubation is available until the step 4 5 μL $25 \mu L$ $50 \mu L$ 125 µL DNA-lipid complex Reagent has been completed Final composition (per well) 96-well 24-well 12-well 6-well Add DNA-lipid complex from step 3 to well of cell culture plate from step 1 DNA-lipid complex 10 μL 50 μL 100 µL 250 µL **DNA-lipid** complex 250 ng 500 ng 1250 ng DNA amount 50 ng 4 ScreenFect[™]A plus Transfection Reagent used $0.15 \text{ or } 0.2 \,\mu\text{L}$ 0.75 or $1.0 \,\mu L$ 1.5 or 2.0 μL $3.75 \text{ or } 5.0 \,\mu\text{L}$ 2000 μL Medium volume 100 μL 500 μL 1000 μL Incubate cells for 1 day ~ at 37°C. Then, analyze transfected cells. Visualize/analyze transfected cells For support, please visit the http://screenfect.jp