FUJIFILM

Wako

Code No. 293-73201 (0.2 mL)
299-73203 (1 mL)
297-73204 (1 mL X 5)

For Genetic Research

ScreenFect™A

ScreenFect™A is a transfection reagent consisting of a new cationic liposome screened※1 by click chemistry. It can be used with various eukaryote-derived cells and can be added directly to mediums containing antibiotics or serum. DNA and siRNA can be transfected into general experimental cell strains (HeLa, HepG2, MDCK, Cos-7, etc.), stem cells (mouse ES cells, etc.), blood cells (macrophages, THP-1, RAW264.7, etc.), microglia, and primary (initial subculture) cells.

In addition, medium replacement after transfection is not required due to low cytotoxicity. And the constituent reagents do not contain any poisonous or deleterious substance.

※1 *Biomaterials*. 2012 Nov; 33(32):8160-6. 2012

〔Kit contents〕

Code No.	Size	ScreenFect™A Transfection Reagent	Dilution Buffer for ScreenFect™A
293-73201	0.2mL	0.2mL	10mL
299-73203	1mL	1mL	50mL
297-73204	1mL×5	1mL×5	50mL×5

〔Storage〕

Keep at 2-10 ℃ (do not freeze).

〔Important Guidelines〕

・"One-Step" transfection method (reverse transfection method) is recommended. The one-step method saves a lot of time. However, there are cases where certain cell types or certain applications may require transfection of adherent cell monolayers. In that cases, please choose "Two-Step" transfection protocol and try medium replacement before adding transfection complexes to the adherent cells.

・Transfection performance strongly depends on ScreenFect™A reagent : DNA ratio, amount of DNA and siRNA and types of cell lines etc. Thus, the optimization of transfection is highly recommended. For additional information and protocols on transfection, please visit Wako's web site. (http://screenfect.jp)

〔Transfection Amounts〕

DNA Transfection

DNA transfection (/well)					
Plate size	Surface area	Medium volume	Total volume SF-DNA complex	DNA /Dilution Buffer	ScreenFect™A /Dilution Buffer
96 wells	0.3cm²	80 μL	20 μL	～100ng / 10 μL	～0.4 μL / 10 μL
24 wells	2cm²	450 μL	80 μL	～500ng / 40 μL	～2.0 μL / 40 μL
12 wells	4cm²	900 μL	160 μL	～1000ng / 80 μL	～4.0 μL / 80 μL
6 wells	10cm²	2250 μL	400 μL	～2500ng / 200 μL	～10 μL / 200 μL

siRNA Transfection

siRNA transfection (/well)					
Plate size	Surface area	Medium volume	Total volume SF-siRNA complex	siRNA /Dilution Buffer	ScreenFect™A /Dilution Buffer
96 wells	0.3cm²	80 μL	20 μL	2-3pmol / 10 μL	0.1-0.3 μL / 10 μL
24 wells	2cm²	450 μL	80 μL	10-20pmol / 40 μL	0.5-1.5 μL / 40 μL
12 wells	4cm²	900 μL	160 μL	20-40pmol / 80 μL	1.0-3 μL / 80 μL
6 wells	10cm²	2250 μL	400 μL	20-60pmol /200 μL	3.5-7.5 μL / 200 μL

Note: Although ScreenFect™A work well for siRNA transfection, for optimal results we highly recommend the use of our specialized reagent ScreenFect™siRNA. Visit our homepage to order a free sample. (http://screenfect.jp)

Note: For large scale transfections it helps to split sample between several tubes.
E. g. for 10 cm dish transfection, take 5 – 6 samples of the 6-well transfection volumes.

〔Protocol〕

The one-step protocol for ScreenFect™A transfection is described in the next page.

The optimal DNA-to-reagent-ratio for efficient cell transfection stays constant at around 1 : 3 to 1 : 4 (DNA 100ng : ScreenFect™A reagent 0.1 μL = 1 : 1) and we recommend splitting cells when they reach 70%-90% confluence to avoid contact inhibition of cell proliferation.

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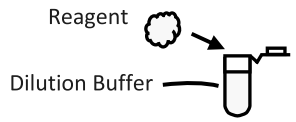
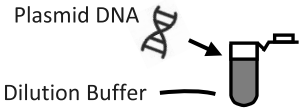
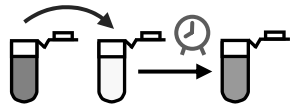
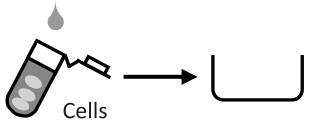
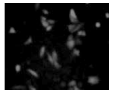
ScreenFect™A One-Step Protocol

ScreenFect™A Transfection Reagents Protocol

Transfect cells according to the following table. Each reaction mix is given per well and accounts for pipetting variations.

Timeline		Steps
1 Day 0	 Cultured cells	**Seed cells to be 70-90 % confluent at transfection**
2	 Suspended cells	**Detach and prepare a cell suspension**
3 Day 1	 Reagent, Dilution Buffer	**Dilute ScreenFect™A Reagent※1 in Dilution Buffer– Mix well** **※1 Vortex the reagent before use**
	 Plasmid DNA, Dilution Buffer	**Prepare master mix of DNA by diluting DNA in Dilution Buffer– Mix well**
4		**Add Diluted DNA to each tube of diluted ScreenFect™A Reagent and incubate for 5 (～20) minutes**
5	 Cells	**Add DNA-lipid complex to the cell suspension and transfer to wells**
6 Day 2		**Visualize/analyze transfected cells**

Procedure Details

Component	96-well		24-well		6-well	
Adherent cells or suspension cells	1.0-4.0 × 10^4		0.5-2.0 × 10^5		0.25-1.0 × 10^6	
Detach cells by trypsin or *Accutase*® for transfection.						
Dilution Buffer for ScreenFect™A	10 μL		40 μL		200 μL	
DNA : Transfection Reagent ratio	1 : 3	1 : 4	1 : 3	1 : 4	1 : 3	1 : 4
ScreenFect™A Transfection Reagent	0.3 μL	0.4 μL	1.5 μL	2 μL	7.5 μL	10 μL
Dilution Buffer for ScreenFect™A	10 μL		40 μL		200 μL	
DNA (0.1-2.5 μg / μL)	100 ng		500 ng		2500 ng	
Diluted DNA	10 μL		40 μL		200 μL	
Diluted ScreenFect™A Transfection Reagent	10 μL		40 μL		200 μL	
Component〔per well〕	**96-well**		**24-well**		**6-well**	
DNA-lipid complex	20 μL		80 μL		400 μL	
DNA amount	100 ng		500 ng		2500 ng	
ScreenFect™A Transfection Reagent used	0.3 and 0.4 μL		1.5 and 2.0 μL		7.5 and 10 μL	
Incubate cells for 1-4 days at 37℃. Then, analyze transfected cells.						

For support, please visit us at http://screenfect.jp