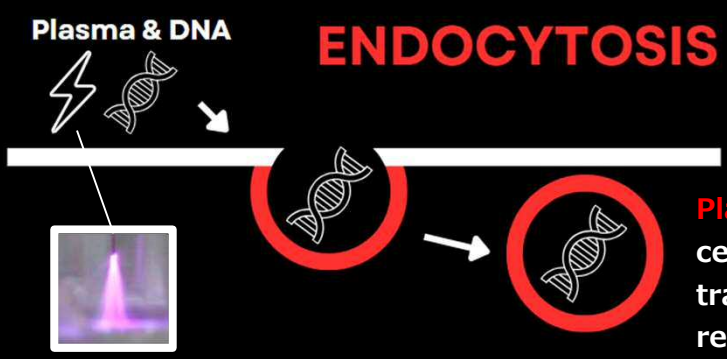
IGENE

Plasma gene molecule introduction device

LINACYTE 3MC

01 Unique transfection method

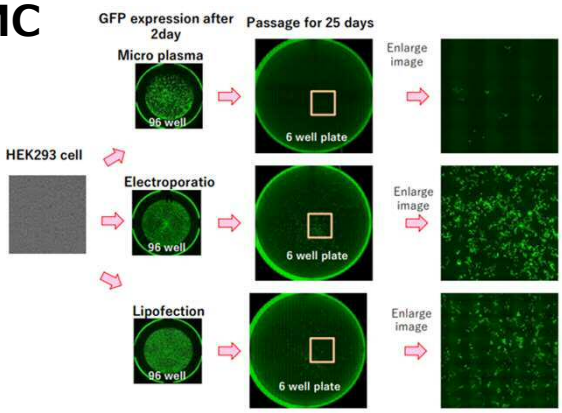


Plasma irradiation triggers endocytosis of the cell. The plasma allows cell-friendly transfection of molecules into the cell, replicating gene introduction of cells in natural living organisms.

02 Advantages of LINACYTE 3MC

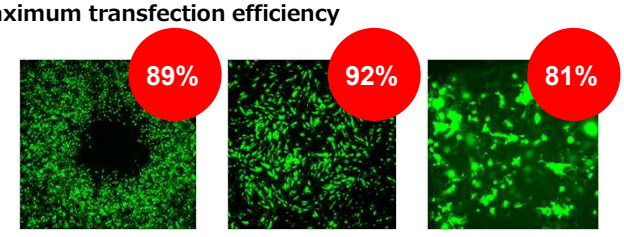
① Safe and low cytotoxicity

Endocytosis effects the cell to actively absorbing the molecule, in this case gene, without damaging its membrane or chromosomes. In addition, genome integration occurs with minimal risk, therefore such side effects as canceration and immune abnormalities are low post gene introduction.



Comparison of random integration with other methods

Maximum transfection efficiency



L929 HeLa CHO

Plus 80% viability rate of cells shows 50% or more successful transfection*

*The transfection efficiency, etc., varies depending on the cell type and experimental conditions.

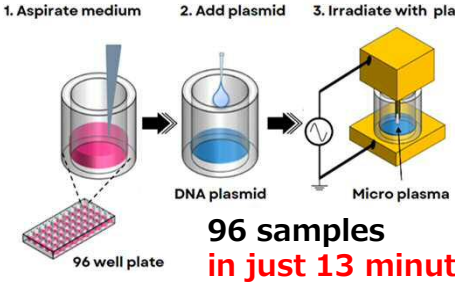
② Successful transfection with low cell damage rate

LINACYTEs low cytotoxicity and ability not to damage cells membrane allows 80% plus viability of the cells in one sample after plasma irradiation. This viability allows 50% plus of the cells to have successful gene transfection and depending on cell type more success rate.

③ Effortless operation

Under 15 minutes from start to finish. Remove the medium from 96-well plate, add DNA solution and install the plate into LINACYTE for plasma irradiation. No need for expensive reagents, preparation of samples in large volume, saving operation time and cost with simple method.

3 million cells/plate in just 3 steps**



96 samples in just 13 minutes

**Cell numbers vary depending on cell type and experimental conditions.

03 Cells that have been successfully transfection with LINACYTE 3MC

Common cell lines | Suspension cell lines | Primary cells | Stem cells (iPS)

No.	cell name	Origin	Origin tissue	No.	cell name	Origin	Origin tissue	No.	cell name	Origin	Origin tissue
1	HepG2	human	liver	20	BJAB	human	peripheral blood	39	COLO201	human	colon
2	HuH7	human	liver	21	Jurkat	human	peripheral blood	40	Hu09	human	bone
3	FLS3	mouse	liver (fetus)	22	K562	human	peripheral blood	41	MBT2	human	bone
4	L alpha	mouse	connective tissue	23	MOLT-4	human	peripheral blood	42	PC-12	rat	adrenal gland
5	MG-63	human	bone	24	THP-1	human	monocytes	43	GOTO	human	nerve
6	Hela	human	uterus	25	RAW	human	monocytes	44	SH SY5Y	human	nerve
7	MDCK	dog	kidney	26	U937	human	monocytes	45	fibroblast	human	skin
8	HEK293	human	kidney (fetus)	27	TK6	human	blood cells	46	HDF	human	skin
9	HSC-3	human	tongue	28	EOL-1	human	eosinophil	47	NHEM	human	melanocytes
10	SAS	human	tongue	29	L6	rat	muscle tissue	48	Huvec	human	vascular endothelial cells
11	CaCo-2	human	colon	30	L	mouse	connective tissue	49	Tic	human	iPS cells
12	A375	human	skin	31	L-929	mouse	connective tissue	50	ACS	human	fat stem cells
13	G361	human	skin	32	COS-7	vervet	kidney	51	HaCaT	human	skin keratinocytes
14	HSC-5	human	skin	33	3T3L1	mouse	fetus	52	astrocytes	human	iPS cells
15	CHO-K1	hamster	ovary	34	NIH 3T3	mouse	fetus	53	neuron	human	iPS cells
16	DD762	mouse	baby bottle	35	Lu99A	human	lung	54	nerve cells	rat	nerve
17	HCC1937	human	baby bottle	36	SF-TY	human	skin	55	MS5	mouse	bone marrow stromal cells
18	PANC-1	human	pancreas	37	Mewo	human	skin lymph nodes				
19	T24	human	bladder	38	MC3T3-E1	mouse	skull				

This technology achieves high transfection efficiency not only in general cell lines but also in a wide range of cell types, including suspension cells, primary cultured cells, and stem cells, which were previously difficult to intergrade using conventional gene transfer methods.

04 Comparison of conventional and plasma transfection

method	LINACYTE 3MC (plasma method)	Viral vector method	Lipofection Method	Electroporation method
Introduction efficiency	High ✓	High	Low～High	Low～High
Cytotoxicity	Minimum ✓	Low～Medium	Medium	Medium～High
Side effects	Minimum Off targetless ✓	Cancer / Impact on the immune system	Possibility of inflammation	Cancer / Impact on the immune system
Corresponding cell type	Over 70 species confirmed ✓	Limited	Limited	Partly limited
Cost	Low ✓	High	High	Low～Medium

05 Product specifications

Product name	LINACYTE 3MC
Size	W340 × D360 × H260 (mm)
Weight	9.8 kg
Power supply	100～240V 50/60 Hz 150 W
Compatible plate	96well plate (Recommended products available)
Compatible cells	Animal cells, plant cells, etc.
Reagent	LINAmix Buffer

AS ONE

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