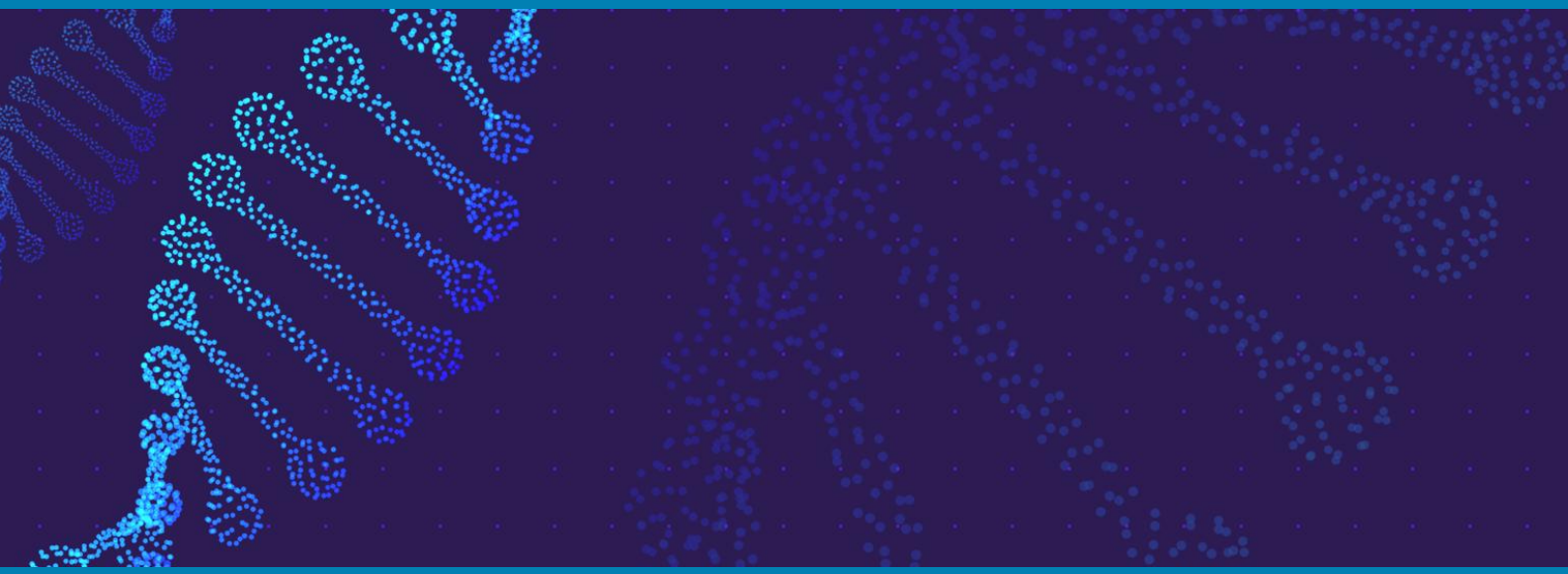
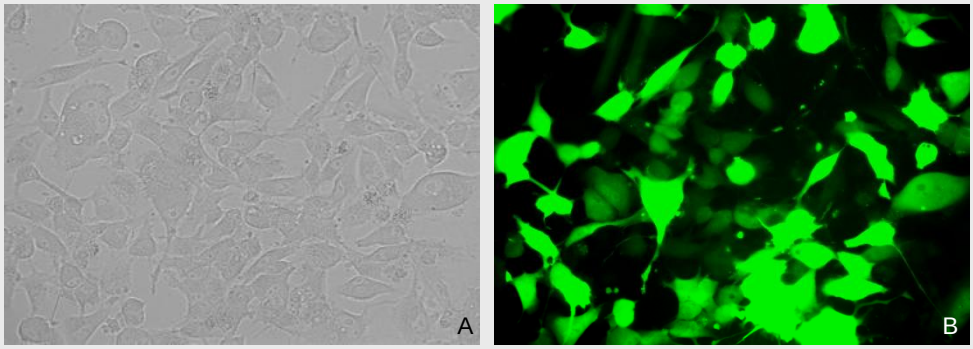
ExTransfection™

Cell Protocols



NanoEntek

253J, Bladder



253J cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 48 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B)**.

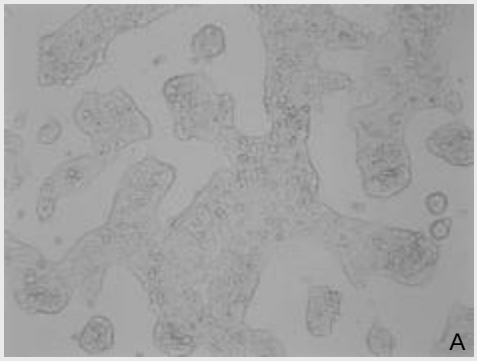
I. Microporation-parameter

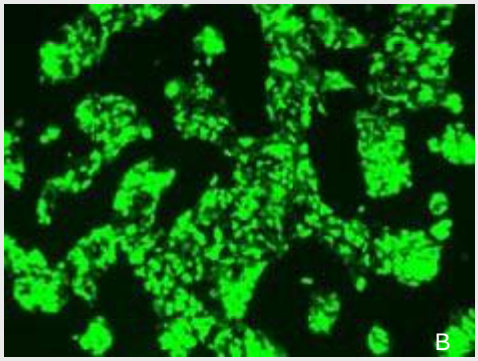
Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1000	40	1	5.6 X 10^6	55%	87%	10 µl
1050	20	2	5.6 X 10^6	57%	87%	10 µl
1100	40	1	5.6 X 10^6	60%	86%	100 µl

II. Cell information

Cell type / Description	253J (Bladder Cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Bladder
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	monolayer
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO^2), 5%

293, Kidney





293 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B)**.

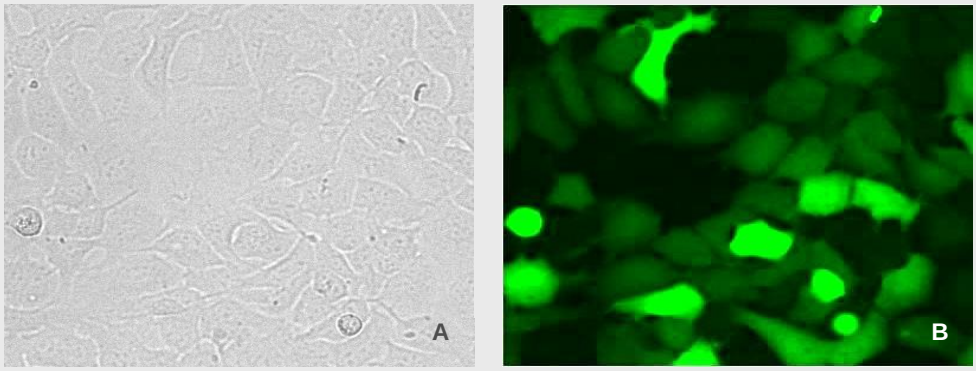
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1200	30	1	5×10^6	87%	71%	10 µl
1150	20	2	5×10^6	83%	80%	10 µl
1100	20	2	5×10^7	80%	80%	100 µl
1300	10	3	1×10^7	99%	99%	10 µl
1100	30	1	1×10^7	99%	99%	10 µl

II. Cell information

Cell type / Description	HEK 293 (Kidney Cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Kidney
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

293A, Kidney



293A cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

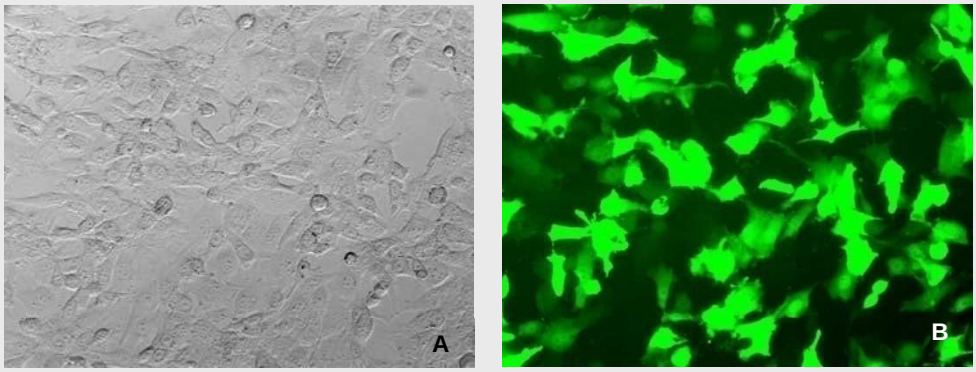
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1245	10	3	5×10^6	90%	90%	10 µl

II. Cell information

Cell type / Description	HEK 293 (transformed by sheared Human Adenovirus type 5)
Characteristics / Species	Adherent
Tissue Origin	Kidney / Human
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

3T3-L1 pre-ad, Adipocytes



3T3-L1 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

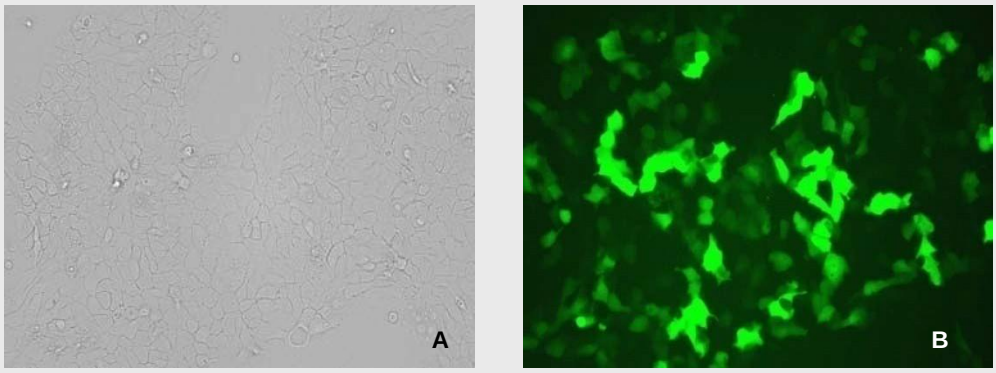
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1300	20	2	7×10^6	85%	80%	10 µl
1150	20	3	7×10^6	87%	70%	10 µl
1300	20	2	5×10^7	80%	85%	100 µl

II. Cell information

Cell type / Description	3T3-L1 (Adipocytes, Cell Line)
Characteristics / Species	Adherent / Mouse
Tissue Origin	Adipocytes
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

A-431, Dermal



A-431 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 48 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

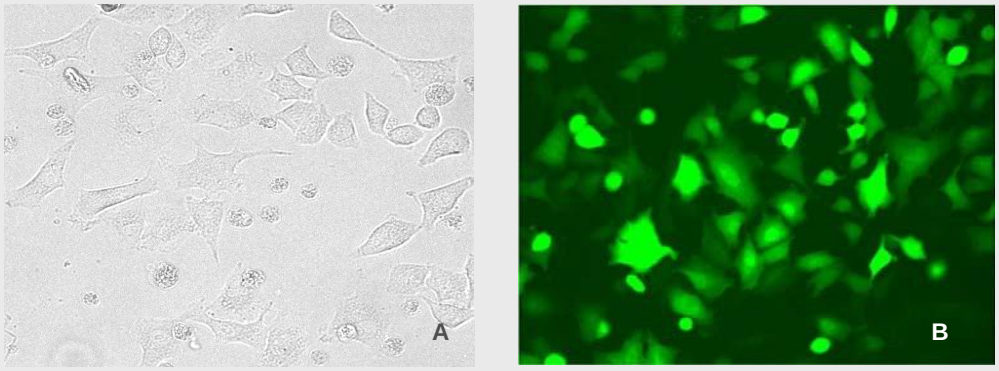
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1400	30	1	5.6×10^6	81%	84%	10 µl
1400	20	2	5.6×10^6	84%	82%	10 µl
1400	20	2	5.6×10^6	66%	61%	100 µl

II. Cell information

Cell type / Description	A-431 (Dermal cell, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Dermal
Media	DMEM, 4 mM L-glutamine, 1.5 g / L Na-bicarbonate, 4.5 g / L glucose + FBS 10%
Morphology	Epithelial
Double time	-
Subculturing	Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

A549, Lung



A549 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B)**.

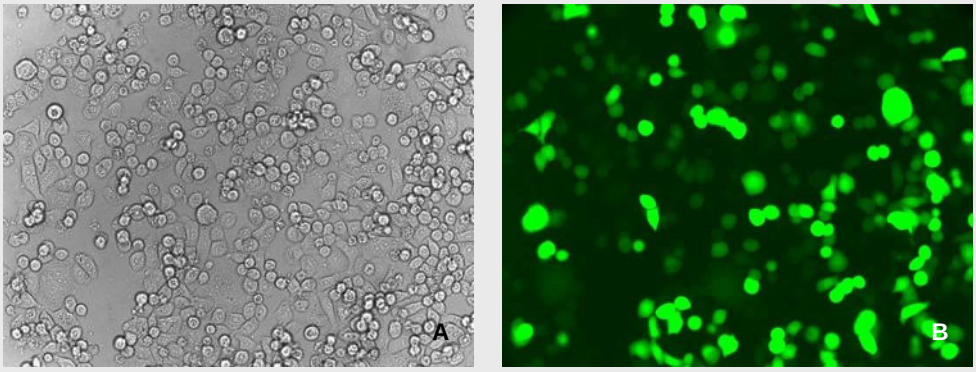
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1200	30	2	5×10^6	75%	92%	10 µl
1230	30	2	5×10^6	75%	88%	100 µl
1300	30	1	1×10^7	70%	95%	10 µl
1100	40	1	1×10^7	65%	95%	10 µl
1100	20	2	1×10^7			10 µl
1400	20	2	1×10^7			10 µl
1500	20	1	1×10^7			10 µl

II. Cell information

Cell type / Description	A549 (Lung cells, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Lung
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	About 22 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37 C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

ARO, Thyroid



ARO cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B)**.

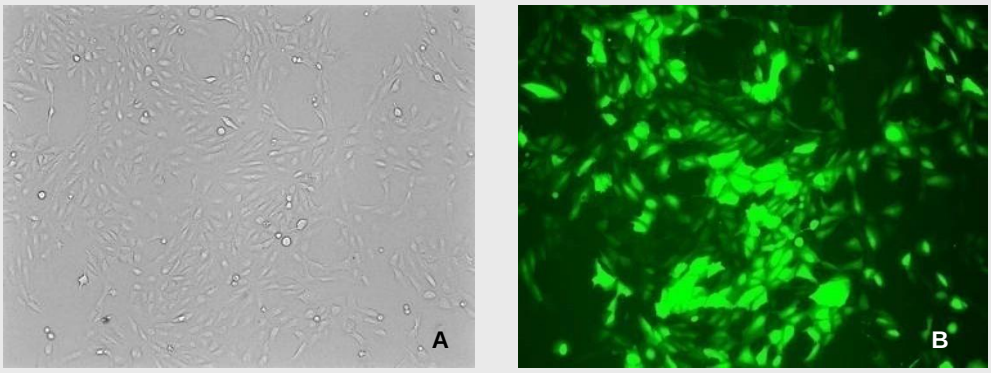
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1400	20	2	5×10^6	85%	70%	10 µl
1650	10	3	5×10^6	77%	84%	10 µl
1350	20	2	5×10^6	76%	90%	100 µl

II. Cell information

Cell type / Description	ARO (Human thyroid carcinoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Thyroid
Media	RPMI 1640, with L-glutamine+10% FBS
Morphology	Epithelial
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

ARPE-19, EYE



ARPE-19 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 48 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

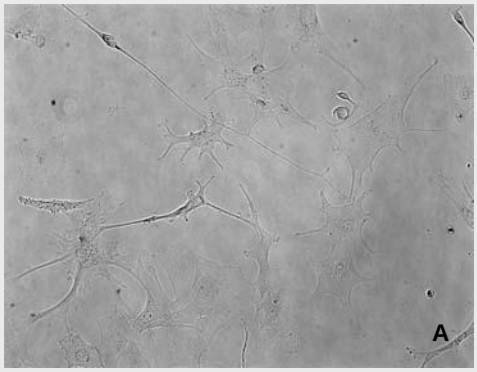
I. Microporation-parameter

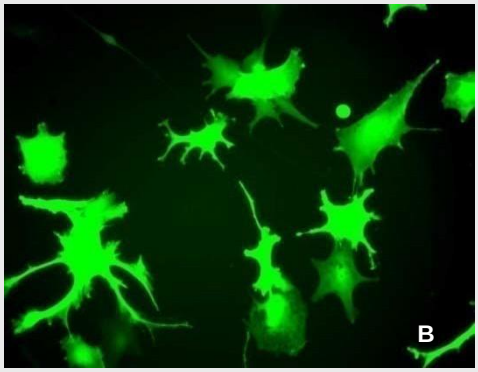
Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1350	20	2	5.6×10^6	93%	90%	10 µl
1200	20	3	5.6×10^6	90%	90%	10 µl
1350	20	2	5.6×10^7	88%	90%	100 µl

II. Cell information

Cell type / Description	ARPE-19 (EYE, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	EYE
Media	DMEM:F12(1:1) with 2.5 mM L-glutamine + 15mM HEPES + 10% FBS
Morphology	Epithelial
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

Astrocyte, Brain





Rat astrocyte cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B)**.

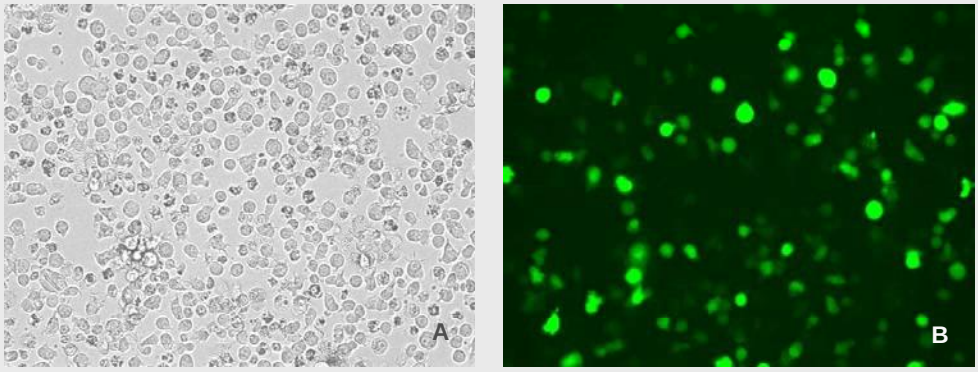
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Analysis time	Tip type
1600	20	1	1×10^6	48%	80%	24hr	10 µl
1650	20	1	1×10^6	76%	70%	48hr	10 µl
1300	20	2	1×10^6	76%	88%	48hr	10 µl
1700	10	2	1×10^6	74%	80%	48hr	10 µl

II. Cell information

Cell type / Desription	Rat Hippocampal Astrocyte (Brain, Primary Cell)
Characteristics / Species	Adherent / Rat
Tissue Origin	Neuron
Media	AGM bulleKit (cat # CC-3186) : Astrocyte Basal Medium + Insulin + rhEGF + ASCORBIC ACID + L-Glutamine + 3% FBS
Morphology	-
Double time	2 weeks (change new media after 4-5 days)
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

B-cell, Blood



B-cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B)**.

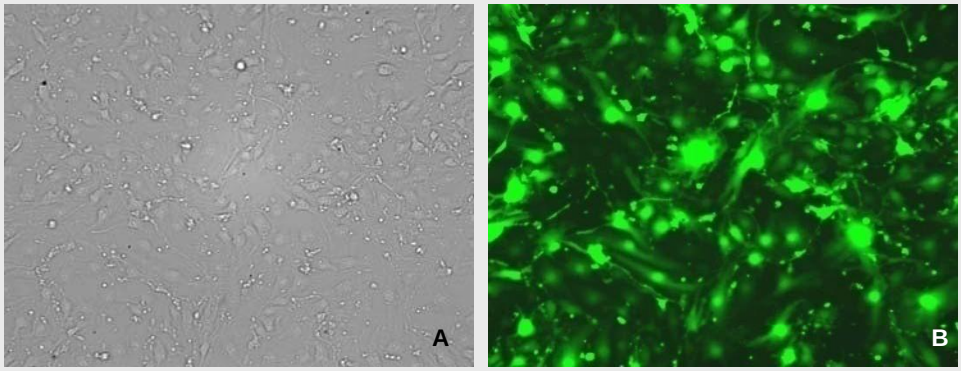
I. Microporation-parameter

Pulse Voltage (V)	Pulse Voltage (V)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1470	30	1	5×10^6	65%	81%	10 µl
1290	40	1	5×10^6	60%	80%	10 µl

II. Cell information

Cell type / Description	B-cell (Blood / Immune cells, Cell line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	Round single cell
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

b-END.3, Brain



b-END.3 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 48 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

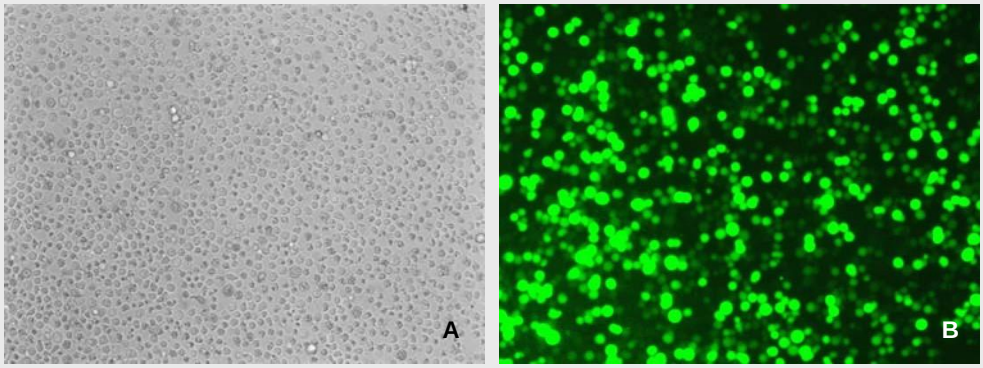
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1700	20	1	7.6×10^6	68%	72%	10 µl
1300	20	2	7.6×10^6	73%	89%	10 µl
1450	20	2	7.6×10^6	57%	98%	100 µl

II. Cell information

Cell type / Description	b-END.3 (brain cell, Cell Line)
Characteristics / Species	Adherent / Mouse
Tissue Origin	Brain
Media	DMEM, 4 mM L-glutamine, 1.5 g / L Na-bicarbonate, 4.5 g / L glucose + FBS 10%
Morphology	Endotherial
Double time	-
Subculturing	Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

BC-1, Lymphoma



BC-1 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B)**.

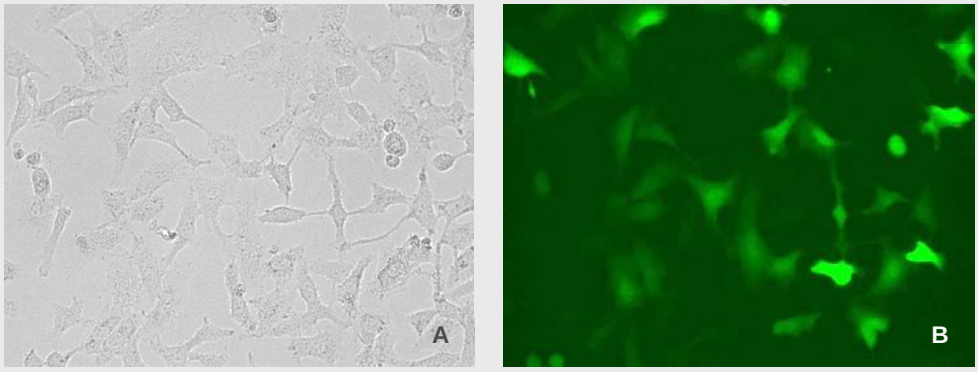
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1600	10	3	5×10^6	75%	60%	10 µl
1450	10	4	5×10^6	70%	70%	10 µl
1600	10	3	5×10^7	70%	65%	100 µl

II. Cell information

Cell type / Description	BC-1 (Blood / immune, Cell Line)
Characteristics / Species	Suspension / Human
Tissue Origin	Lymphoma
Media	RPMI1640,[with 4500 mg / L D-glucose, with L-glutamine, with 10ml HEPES, 1mM sodium pyruvate, 1500mg / L-sodium bicarbonate]+20% FBS
Morphology	Lymphoblast
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

BEAS-2B, Lung



BEAS-2B cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

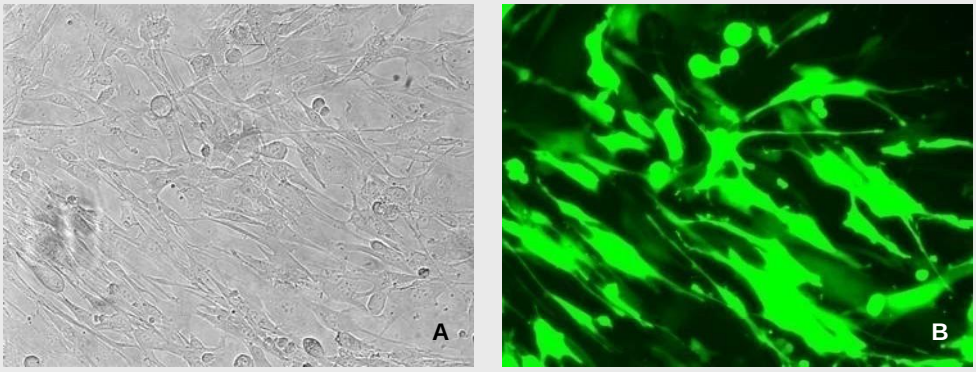
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1290	20	2	5×10^6	68%	70%	10 µl

II. Cell information

Cell type / Description	BEAS-2B (Epithelial cells / Bronchial epithelial, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Lung
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

BHK-21, Kidney



BHK-21cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B)**.

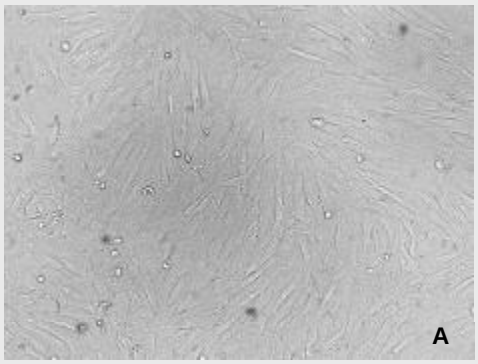
I. Microporation-parameter

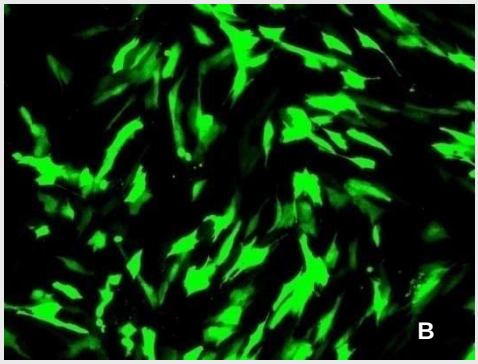
Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1200	30	1	5.5×10^6	91%	90%	10 µl
1150	20	2	5.5×10^6	86%	90%	10 µl

II. Cell information

Cell type / Description	BHK-21 (Kidney cells, Cell Line)
Characteristics / Species	Adherent / Hamster
Tissue Origin	Kidney
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Fibroblast
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

BJ, Dermal





BJ cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

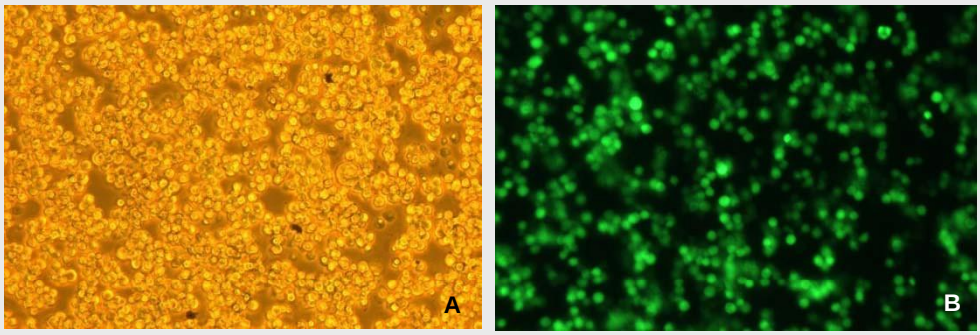
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1650	20	1	5×10^6	92%	90%	10 µl
1650	20	1	3.5×10^7	88%	85%	10 µl

II. Cell information

Cell type / Description	BJ (Human Foreskin Fibroblast, Primary cell)
Characteristics / Species	Adherent / Human
Tissue Origin	Dermal
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Fibroblast
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

BJAB, Blood



BJAB cells were transfected using ExTransfection™ and 0.3 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

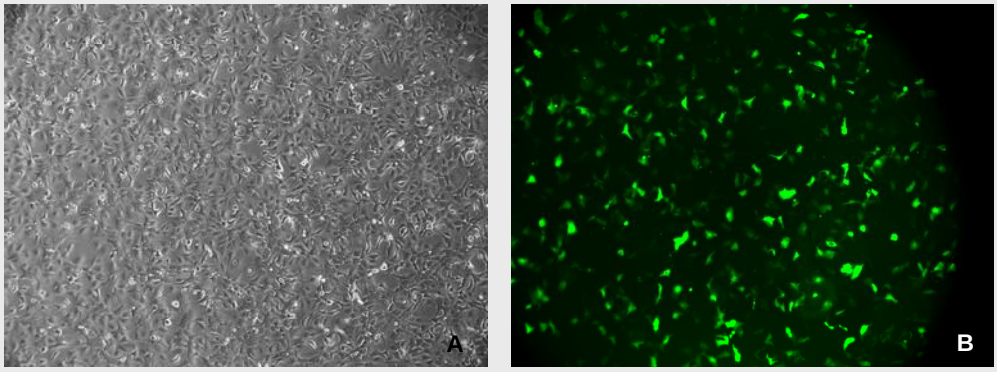
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1350	40	1	$4X10^7$	70%	80%	10 µl

II. Cell information

Cell type / Description	BJAB (EBV-negative Burkitt's lymphoma cell line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI 1640 (with L-glutamate) +10%FBS
Morphology	Suspension
Double time	-
Subculturing	Medium renewal : every 2 to 3 days
Culture condition	Temperature:37 ° C atmosphere : air 95% ,carbon dioxide (CO_2) 5%

BT-20, Breast



BT-20 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

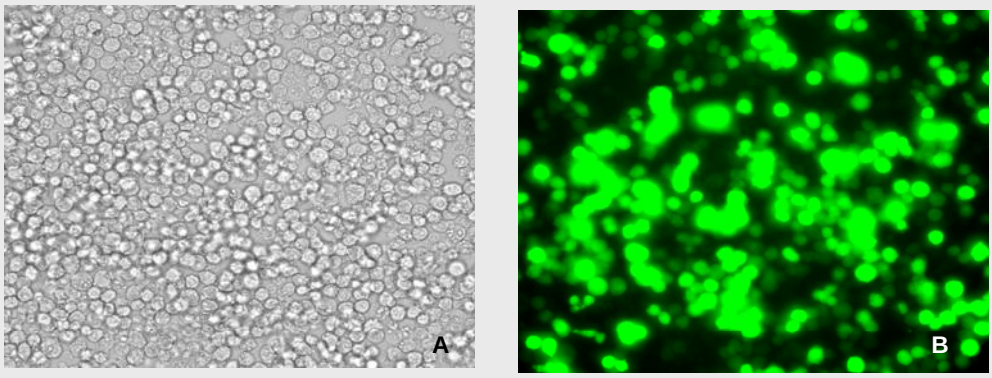
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1600	20	1	$1x10^7$	61%	56%	10 µl
1300	20	2	$1x10^7$	56%	71%	10 µl
1800	20	1	$1x10^7$	69%	68%	100 µl

II. Cell information

Cell type / Description	BT-20 (Breast Cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Breast
Media	EMEM medium with 2 mM L-glutamine adjusted to contain 1.5 g / L sodium bicarbonate, 1.0 mM sodium pyruvate, 0.1 mM nonessential amino acids, 90%; fetal bovine serum, 10%
Morphology	Epithelial
Double time	-
Subculturing	Medium renewal:Every 2 to 3 times weekly
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO^2), 5%

BW5147(T200-A)5.2, Blood



BW5147 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

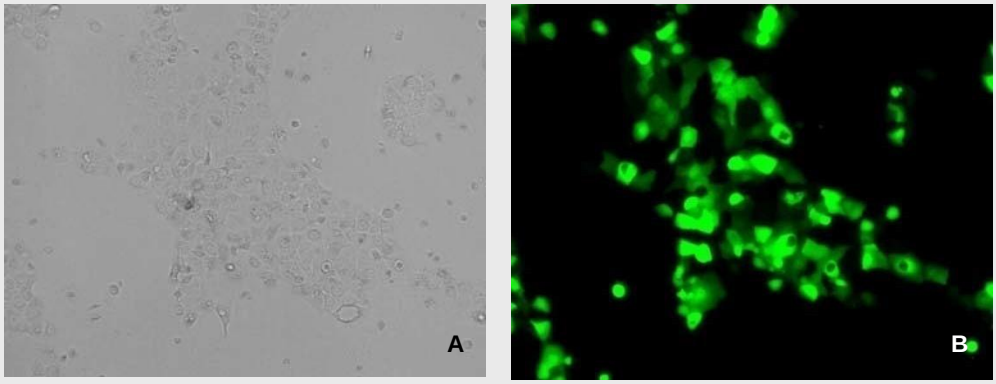
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1400	20	2	7×10^6	51%	89%	10 µl
1400	30	1	7×10^6	47%	69%	10 µl
1400	20	2	7×10^6	56%	96%	100 µl

II. Cell information

Cell type / Description	BW5147(T200-A)5.2(Blood Cells, Cell Line)
Characteristics / Species	Suspension / Mouse
Tissue Origin	Blood
Media	Dulbecco's modified Eagle's medium with 4 mM L-glutamine adjusted to contain 1.5 g / L sodium bicarbonate and 4.5 g / L glucose, 90%; heat-inactivated horse serum, 10%
Morphology	Lymphoblast
Double time	-
Subculturing	Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

BxPC-3, Pancreas



BxPC-3 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

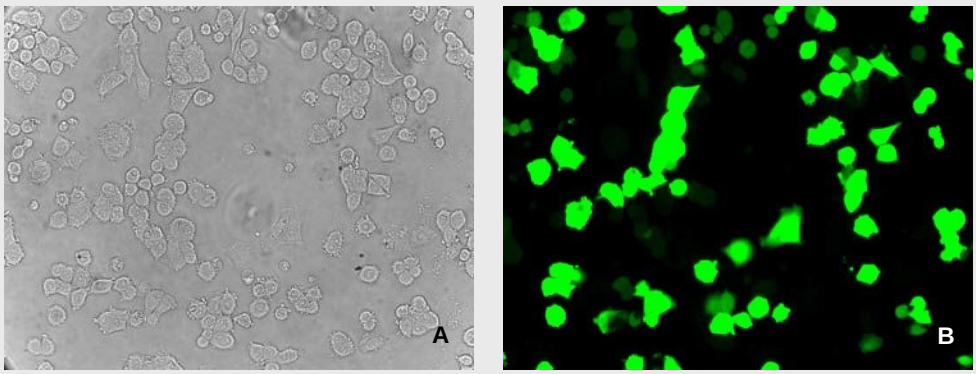
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1650	10	4	5.6 x 10^6	64%	34%	10 µl

II. Cell information

Cell type / Description	BxPC-3 (epithelial Cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Pancreas
Media	RPMI 1640 medium with 2 mM L-glutamine adjusted to contain 1.5 g / L sodium bicarbonate, 4.5 g / L glucose, 10 mM HEPES, and 1.0 mM sodium pyruvate, 90%; fetal bovine serum, 10%
Morphology	Epithelial
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

C-33 A, Cervix



C-33 A cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

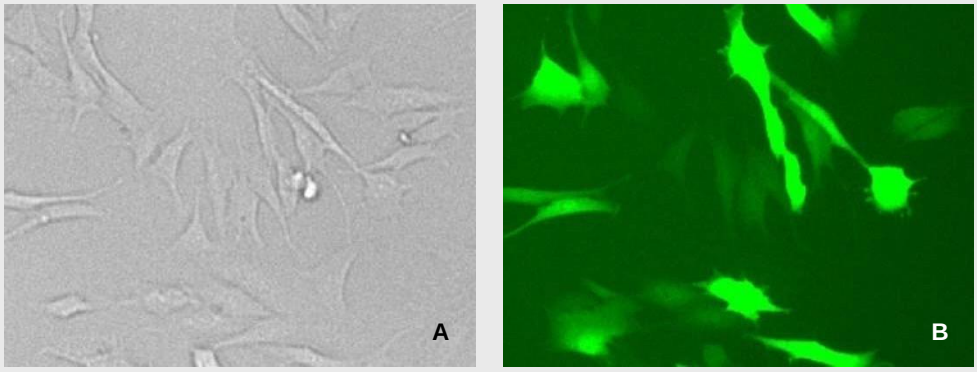
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1150	25	2	5.0×10^6	78%	85%	10 µl
1150	25	2	3.66×10^7	81%	85%	10 µl
1350	10	4	3.66×10^7	80%	82%	10 µl

II. Cell information

Cell type / Description	C-33 A (Cervix Cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Cervix
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO^2), 5%

C2C12, Muscle



C2C12 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

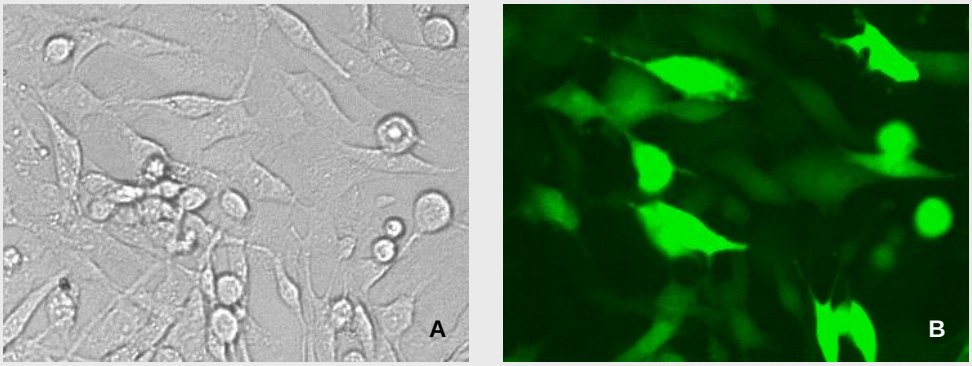
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1650	10	3	5×10^6	95%	96%	10 µl
1400	20	2	1×10^7	95%	95%	10 µl
1150	30	2	1×10^7	95%	90%	10 µl
1700	20	1	1×10^7	90%	95%	10 µl

II. Cell information

Cell type / Description	C2C12 (Myoblast cell line / Fibroblast-like morphology, Cell line)
Characteristics / Species	Adherent / Mouse
Tissue Origin	Muscle
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Fibroblast
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

C6 glial cell, Brain



C6 glial cells were transfected using ExTransfection™ and 0.5 ug of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

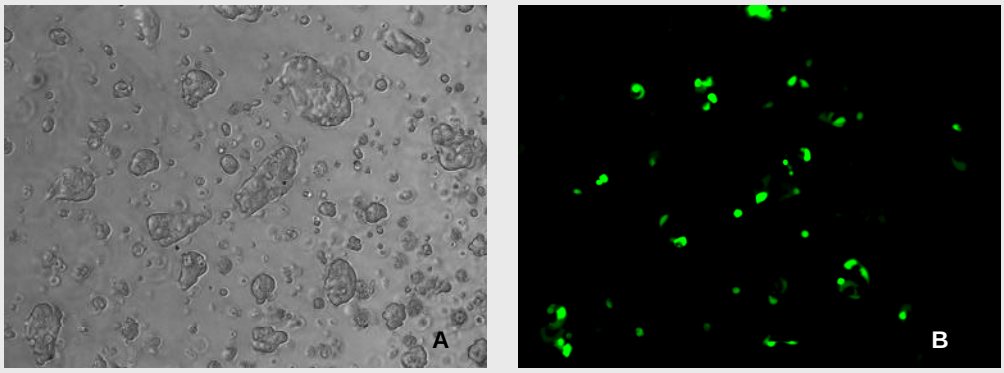
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1700	20	1	5×10^6	90 %	91 %	10 µl
1860	20	1	5×10^6	92 %	95 %	100 µl

II. Cell information

Cell type / Description	C6 (Neural cells / Glioma cells, Cell line)
Characteristics / Species	Adherent / Rat
Tissue Origin	Brain
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Fibroblast
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

Calu-3, Lung



Calu-3cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

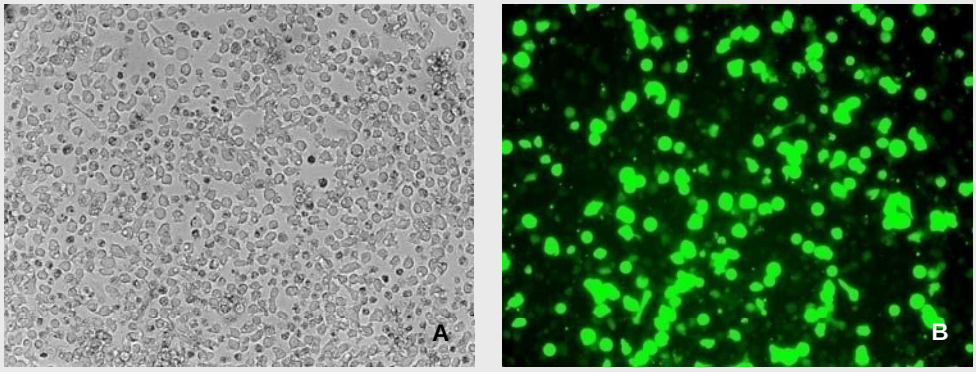
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1400	20	2	1×10^7	42%	60%	10 µl
1400	20	2	1×10^7	40%	73%	10 µl
1400	20	2	1×10^7	40%	73%	100 µl

II. Cell information

Cell type / Description	Calu-3 (Lung Cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Lung
Media	EMEM medium with 2 mM L-glutamine adjusted to contain 1.5 g / L sodium bicarbonate, 1.0 mM sodium pyruvate, 0.1 mM nonessential amino acids, 90%; fetal bovine serum, 10%
Morphology	Epithelial
Double time	
Subculturing	Medium renewal:2 to 3 times per week
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

CCRF-CEM, Blood



CCRF-CEM cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

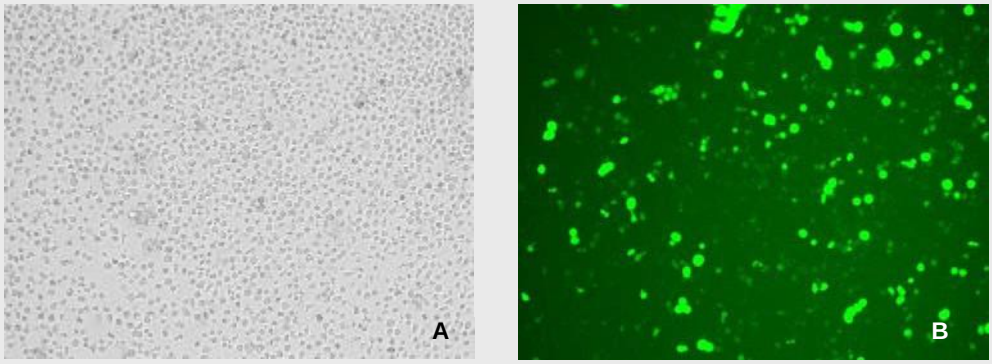
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1350	30	1	5×10^6	50%	65%	10 µl
1230	40	1	5×10^6	70%	75%	10 µl
1140	45	1	5×10^6	68%	70%	10 µl

II. Cell information

Cell type / Desription	CCRF-CEM (Blood,Cell line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	Lymphoblast
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

CEM, Blood



CEM cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

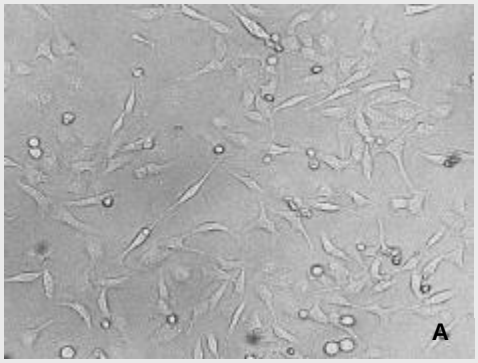
I. Microporation-parameter

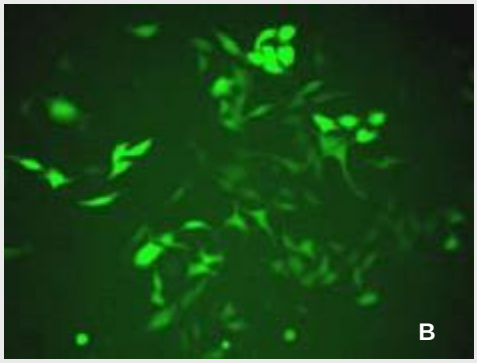
Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1230	40	1	5×10^6	70%	75%	10 µl
1140	45	1	5×10^6	68%	70%	10 µl

II. Cell information

Cell type / Description	CEM (Blood / Immune cell / Acute T-cell leukemia, Cell line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	Lymphoblast
Double time	About 26 hr
Subculturing	Add fresh medium (20% to 30% by volume) every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

ChangX-31, Liver





ChangX-31 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

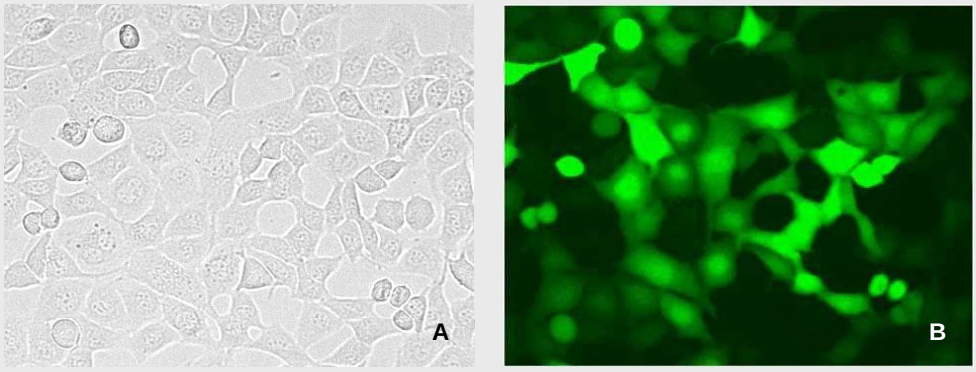
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1050	50	1	5×10^6	75%	70%	10 µl

II. Cell information

Cell type / Description	Chang liver (Cells contain Human papilloma virus, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Liver
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

CHO-K1, Ovary



CHO cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

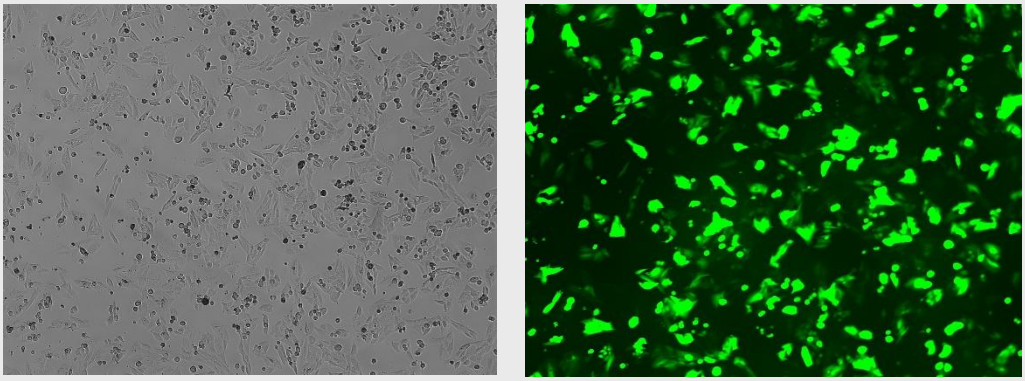
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1560	5	10	5×10^6	90%	93%	10 µl
1650	10	3	5×10^6	88%	91%	10 µl
1620	10	3	5×10^6	91%	92%	100 µl
1700	20	1	1×10^7	90%	95%	10 µl
1300	20	2	1×10^7	90%	95%	10 µl
1400	30	1	1×10^7			
1400	20	2	1×10^7			
1600	20	2	1×10^7			

II. Cell information

Cell type / Description	CHO-K1 (Ovarian cells, Cell line)
Characteristics / Species	Adherent / Hamster
Tissue Origin	Ovary
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	About 26 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

CHO-S, Ovary



CHO-S cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 48 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

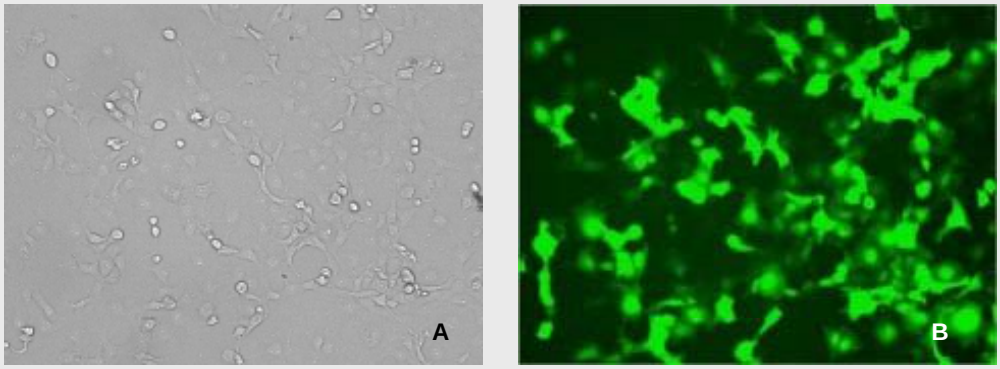
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1650	10	3	1×10^7	90%	95%	10 µl
1600	20	1	1×10^7			
1300	20	2	1×10^7			
1500	20	1	1×10^7			
1200	20	2	1×10^7			

II. Cell information

Cell type / Description	CHO-S (Ovarian cells, Cell line)
Characteristics / Species	Adherent / Hamster
Tissue Origin	Ovary
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	About 26 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

COS-7, Kidney



COS-7 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

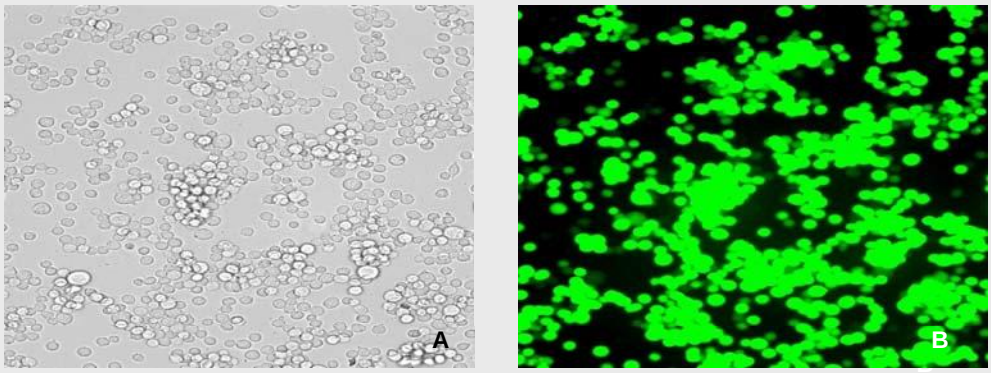
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1050	30	2	5×10^6	90%	91 %	10 µl
1050	30	2	5×10^6	90%	95 %	100 µl

II. Cell information

Cell type / Description	COS-7 (Kidney cells, cell line)
Characteristics / Species	Adherent / Monkey
Tissue Origin	Kidney
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Fibroblast
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

COLO 201, Colon



COLO 201cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 72 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

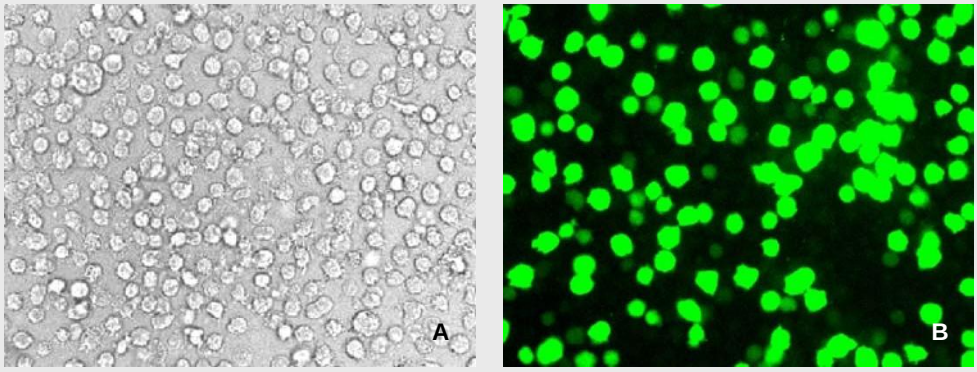
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1700	20	1	7.6×10^6	92%	90%	10 µl
1450	20	2	7.6×10^6	92%	87%	10 µl
1400	20	2	7.6×10^6	82%	78%	100 µl

II. Cell information

Cell type / Description	COLO 201 (Colon Cells, Cell Line)
Characteristics / Species	Suspension, with some loosely Adherent cells / Human
Tissue Origin	Colon
Media	RPMI 1640 medium with 2 mM L-glutamine adjusted to contain 1.5 g / L sodium bicarbonate, 4.5 g / L glucose, 10 mM HEPES, and 1.0 mM sodium pyruvate, 90%; fetal bovine serum, 10%
Morphology	Bipilar, slightly refractile, fibroblast-like cell
Double time	-
Subculturing	Medium renewal:1 to 2 times per week
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO^2), 5%

Dendritic cell, Blood



Dendritic cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

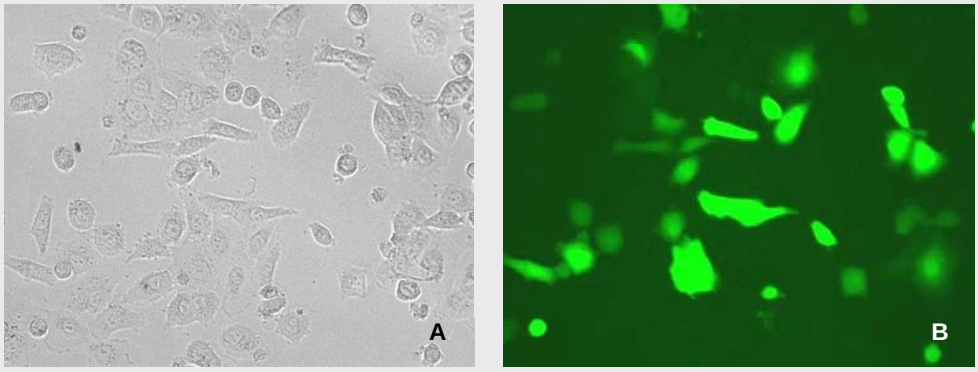
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1500	30	1	5×10^6	50%	70%	10 µl

II. Cell information

Cell type / Description	Dendritic cell (Blood / Immune Cells, Primary Cell)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI-1640, with L-glutamine, with IL-4 (1,000 units / ml), with GM-CSF (1,000 units / ml)+10% FBS
Morphology	Loosely Adherent or non-Adherent cells of irregular shape with dendrites.
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

DU145, Prostate



DU145 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

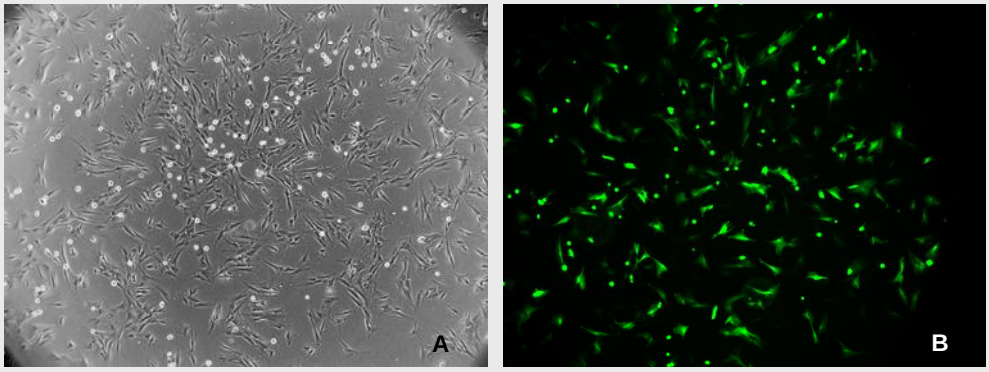
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1260	20	2	5×10^6	77%	80%	10 µl
1100	20	2	1×10^7	85%	90%	10 µl
950	30	2	1×10^7	80%	90%	10 µl
1100	30	1	1×10^7			
1000	40	1	1×10^7			

II. Cell information

Cell type / Description	DU145 (Prostate cells / Prostate carcinoma cell line derived from metastatic site of brain, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Prostate
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

E.Derm(NBL-6), Skin



E.Derm(NBL-6) cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

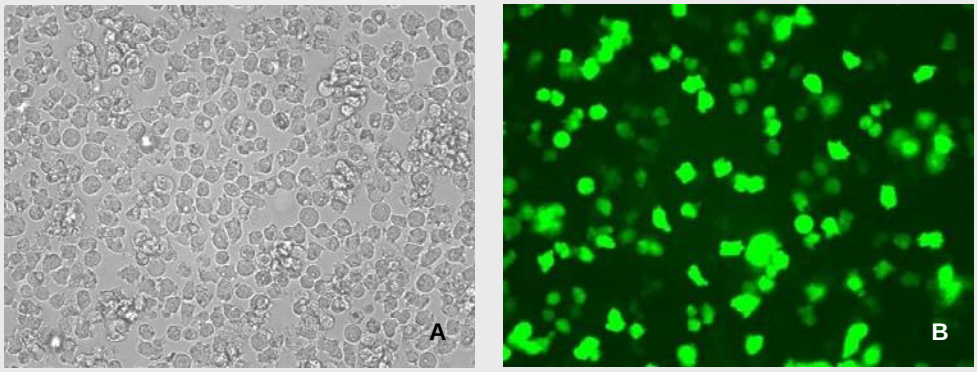
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1700	20	1	$1x10^7$	72%	75%	10 µl
1800	20	1	$1x10^7$	51%	86%	100 µl

II. Cell information

Cell type / Description	E.Derm(NBL-6) (Skin Cells, Cell Line)
Characteristics / Species	Adherent / Horse
Tissue Origin	Skin
Media	EMEM medium with 2 mM L-glutamine adjusted to contain 1.5 g / L sodium bicarbonate, 1.0 mM sodium pyruvate, 0.1 mM nonessential amino acids, 90%; fetal bovine serum, 10%
Morphology	Fibroblast
Double time	-
Subculturing	Medium renewal:2 to 3 times per week
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO^2), 5%

EL4, Blood



EL4 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

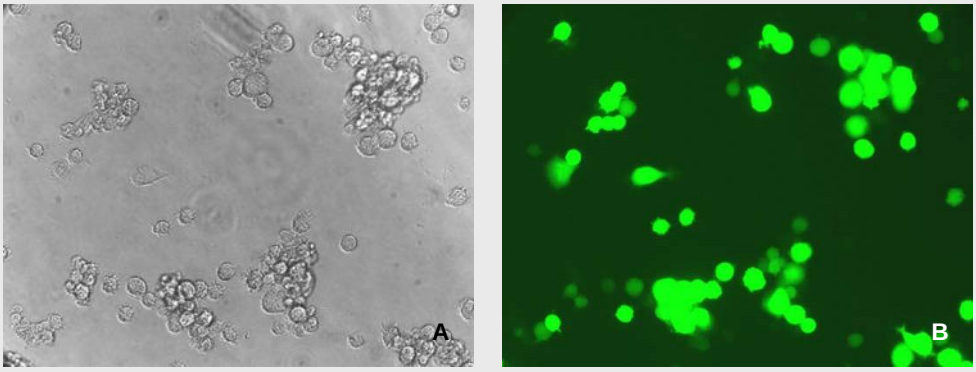
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1080	50	1	5×10^6	78 %	70 %	10 µl

II. Cell information

Cell type / Description	EL4 (T lymphocyte / Lymphoma, Cell line)
Characteristics / Species	Suspension / Mouse
Tissue Origin	Blood
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Suspension
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37 C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

F-11, Brain



F-11 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

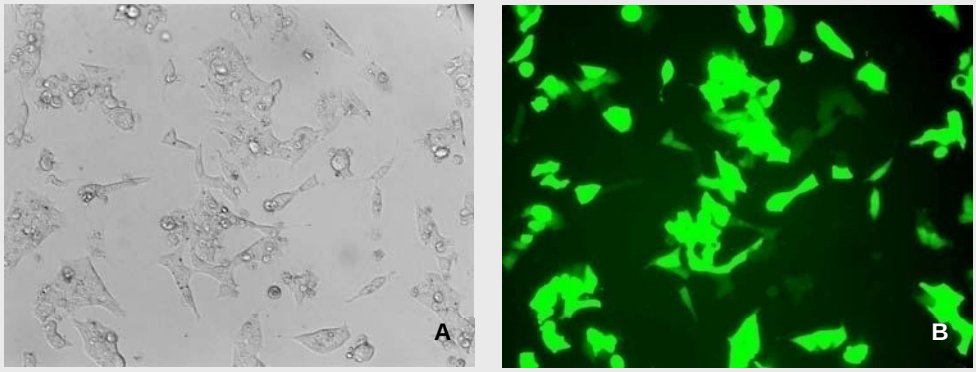
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
900	35	2	5×10^6	84%	70%	10 µl

II. Cell information

Cell type / Description	F-11 (Embryonic dorsal root ganglion / Neuroblstoma hybridoma, Cell line)
Characteristics / Species	Adherent / Rat
Tissue Origin	Brain
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate + 10% FBS
Morphology	Polygonal
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

F9, Embryo



F9 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

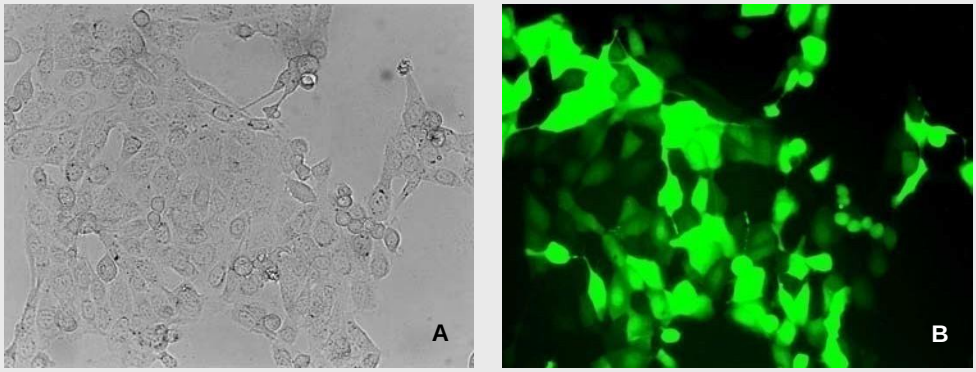
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1300	30	1	7×10^6	76%	90%	10 µl
1350	20	2	7×10^6	80%	80%	10 µl
1350	15	3	7×10^6	78%	80%	10 µl
1350	20	2	5×10^7	73%	85%	100 µl

II. Cell information

Cell type / Description	F9 (Embryo, Cell Line)
Characteristics / Species	Adherent / Mouse
Tissue Origin	Embryo
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	8 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

FRO, Thyroid



FRO cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

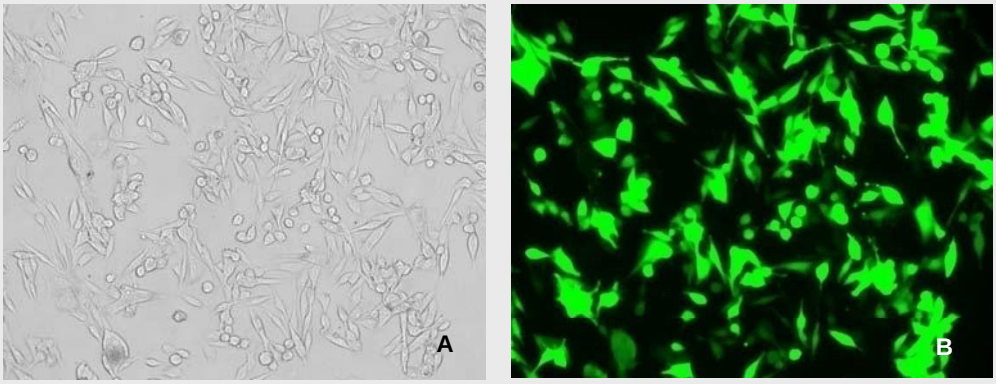
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1450	10	3	7×10^6	83%	93%	10 µl
1400	20	2	7×10^6	80%	84%	10 µl
1200	20	2	5×10^7	81%	85%	100 µl

II. Cell information

Cell type / Desription	FRO (Thyroid, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Thyroid
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	-
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

G-361, Dermal



G-361 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

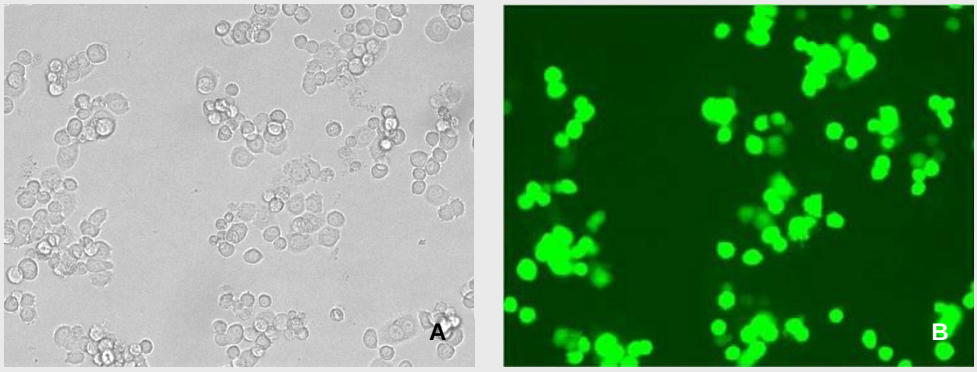
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1550	20	1	5.6 X 10^6	86%	64%	10 µl
1050	40	1	5.6 X 10^6	68%	80%	10 µl
1450	20	1	5.6 X 10^6	88%	79%	100 µl

II. Cell information

Cell type / Description	G-361 (epithelial Cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Dermal
Media	McCoy's 5a medium (modified) with 1.5 mM L-glutamine adjusted to contain 2.2 g / L sodium bicarbonate, 90%; fetal bovine serum 10%
Morphology	Epithelial
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

GH3, Brain



GH3 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

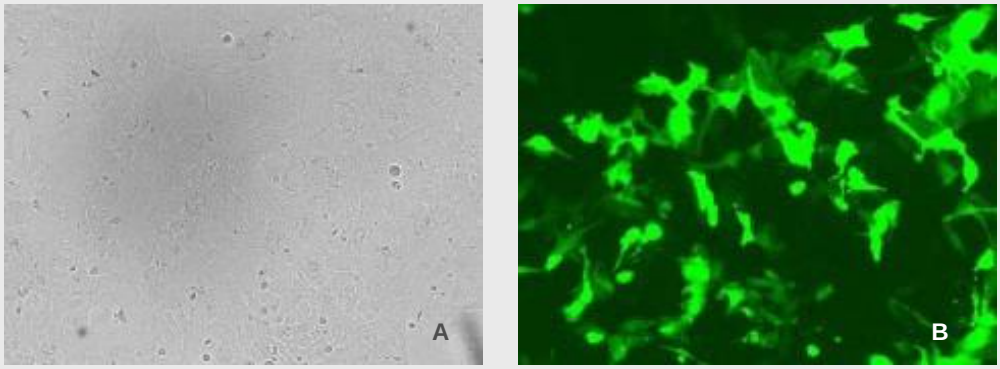
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1350	30	1	5×10^6	74 %	95 %	10 µl

II. Cell information

Cell type / Description	GH3 (Pituitary tumor, Cell line)
Characteristics / Species	Adherent / Rat
Tissue Origin	Pituitary gland
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+15% HS + 5% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

Glial cell, Brain



Mouse glial cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

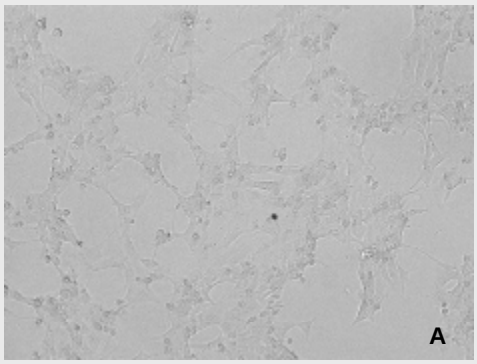
I. Microporation-parameter

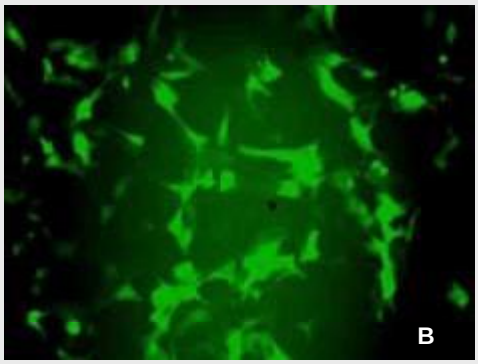
Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1425	30	1	5×10^6	48%	80%	10 µl

II. Cell information

Cell type / Description	Glial (Mouse glial / Neural cell, Primary cell)
Characteristics / Species	Adherent / Mouse
Tissue Origin	Brain
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

GT1-1, Brain





GT1-1 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

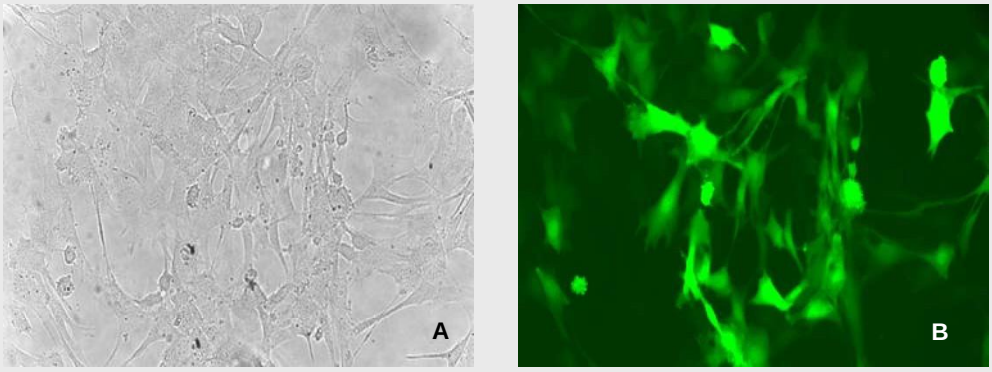
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1350	30	1	5×10^6	80%	90%	10 µl
1350	20	2	5×10^6	80%	85%	10 µl

II. Cell information

Cell type / Description	GT1-1(Neural cells, Cell line)
Characteristics / Species	Adherent / Mouse
Tissue Origin	Brain
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

GT1-7, Brain



GT1-7 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

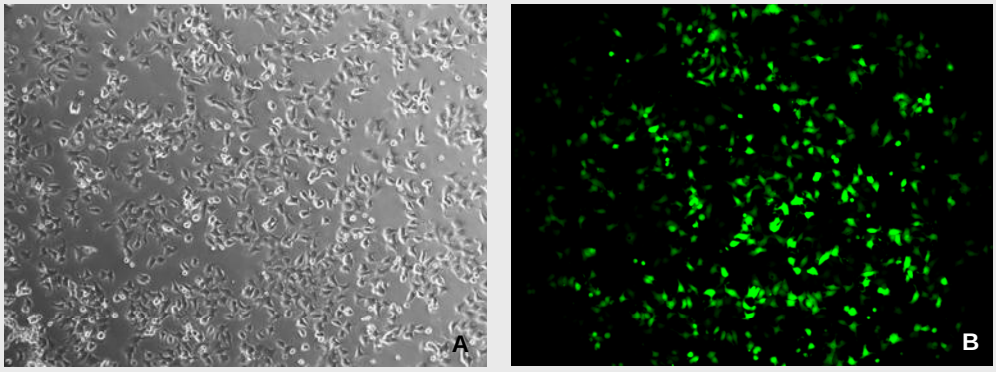
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1350	30	1	5×10^6	89 %	90%	10 µl
1100	30	2	5×10^6	86 %	90%	10 µl
1350	30	1	2.5×10^7	87 %	85%	10 µl

II. Cell information

Cell type / Description	GT1-7 (Neural, Cell line)
Characteristics / Species	Adherent / Mouse
Tissue Origin	Brain
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37 C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

H-4-II-E, Liver



H-4-II-E cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

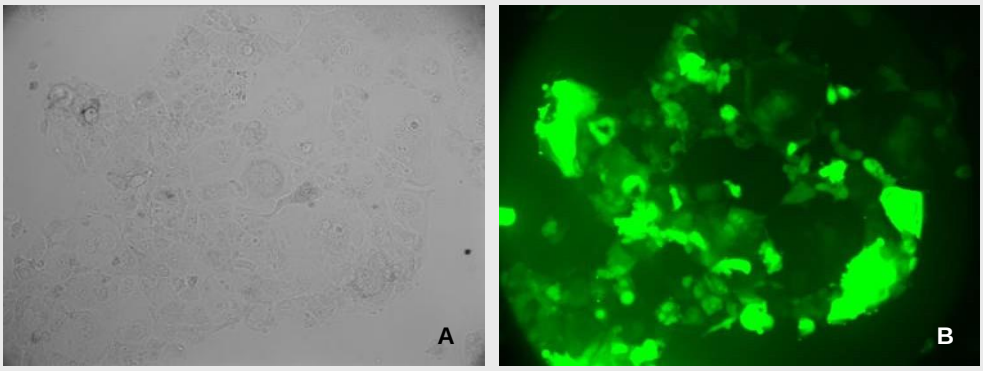
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1600	20	1	1 x 10^7	94%	79%	10 µl
1300	30	1	1 x 10^7	91%	91%	10 µl
1350	30	1	1 x 10^7	93%	91%	100 µl

II. Cell information

Cell type / Description	H-4-II-E (Liver Cells, Cell Line)
Characteristics / Species	Adherent / Rat
Tissue Origin	Liver; hepatoma
Media	EMEM medium with 2 mM L-glutamine adjusted to contain 1.5 g / L sodium bicarbonate, 1.0 mM sodium pyruvate, 0.1 mM nonessential amino acids, 90%; fetal bovine serum, 10%
Morphology	Epithelial
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

HCC1937, Breast



HCC1937 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

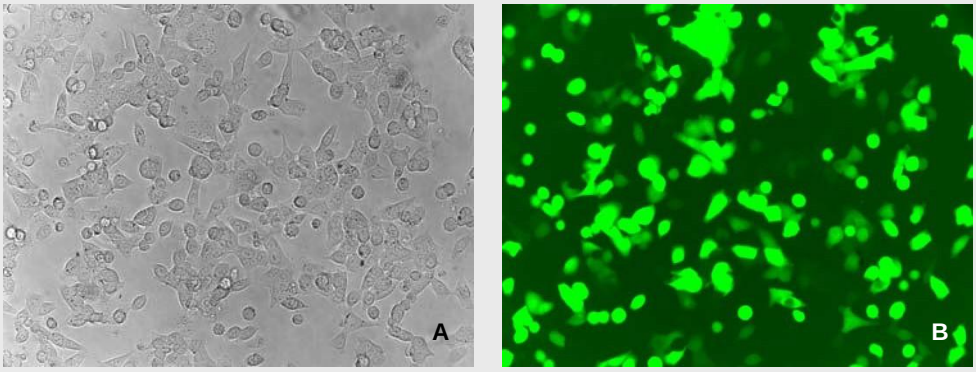
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1550	10	3	5 x 10^6	70%	70%	10 µl
1600	10	3	5 x 10^6	70%	75%	100 µl
2200	10	1	5 x 10^6	70%	70%	10 µl

II. Cell information

Cell type / Description	HCC1937 (Breast epithelial, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Breast Epithelial
Media	RPMI1640,[with 4500 mg / L D-glucose, with L-glutamine, with 10ml HEPES, 1mM sodium pyruvate, 1500mg / L-sodium bicarbonate]+10% FBS
Morphology	Epithelial
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

HCT-116, Colon



HCT-116 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

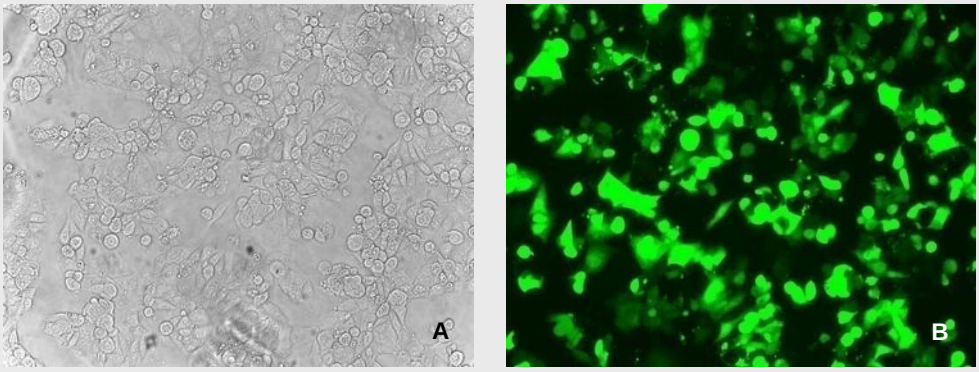
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1530	20	1	5×10^6	91%	90%	10 µl
1130	30	2	5×10^6	88%	90%	10 µl

II. Cell information

Cell type / Description	HCT-116 (Colorectal adenocarcinoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Colon
Media	McCoy's 5a medium (modified), with 1.5 mM L-glutamine, with 2.2 g / L sodium bicarbonate+ 10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

HCT-15, Colon



HCT-15 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

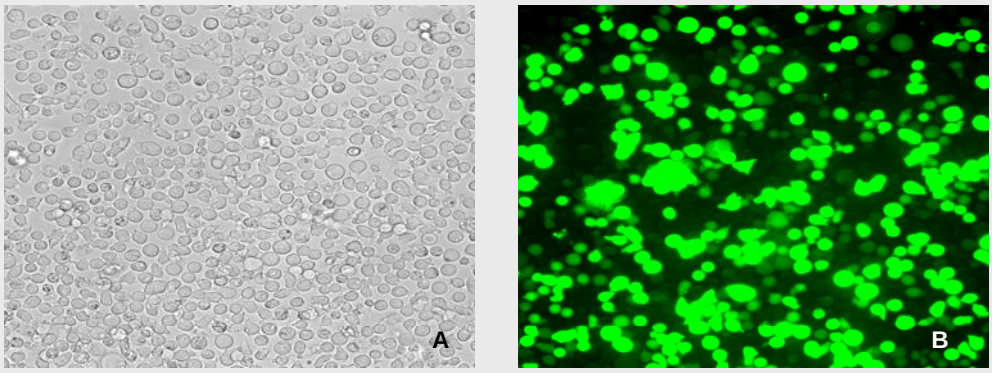
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1130	40	2	5×10^6	88%	80%	10 µl
1210	20	2	5×10^6	74%	80%	10 µl
1150	40	2	4.6×10^7	75%	80%	10 µl

II. Cell information

Cell type / Description	HCT-15 (Gastrointestinal Tract Cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Colon
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37 C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

HEL 92.1.7, Blood



HEL92.1.7 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 48 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

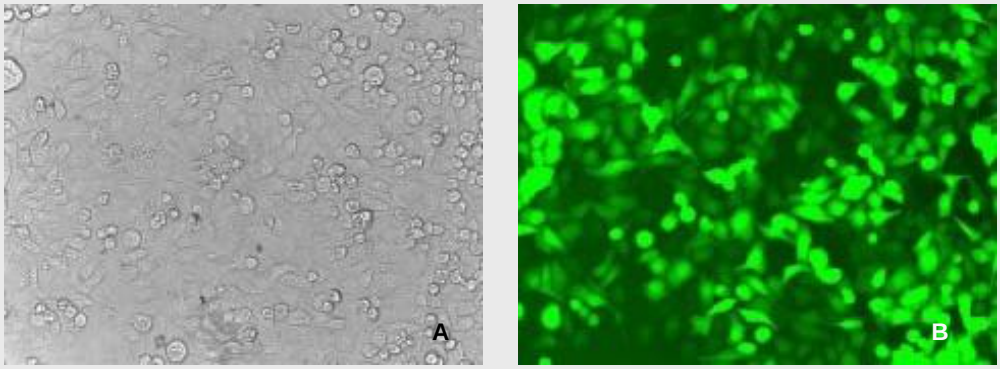
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1450	20	2	7.6×10^6	83%	48%	10 µl
1300	20	3	7.6×10^6	76%	78%	10 µl
1400	20	2	7.6×10^6	78%	67%	100 µl

II. Cell information

Cell type / Description	HEL92.1.7 (Blood Cells, Cell Line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI 1640 medium with 2 mM L-glutamine adjusted to contain 1.5 g / L sodium bicarbonate, 4.5 g / L glucose, 10 mM HEPES, and 1.0 mM sodium pyruvate, 90%; fetal bovine serum, 10%
Morphology	Lymphoblast
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

HeLa, Cervix



HeLa cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

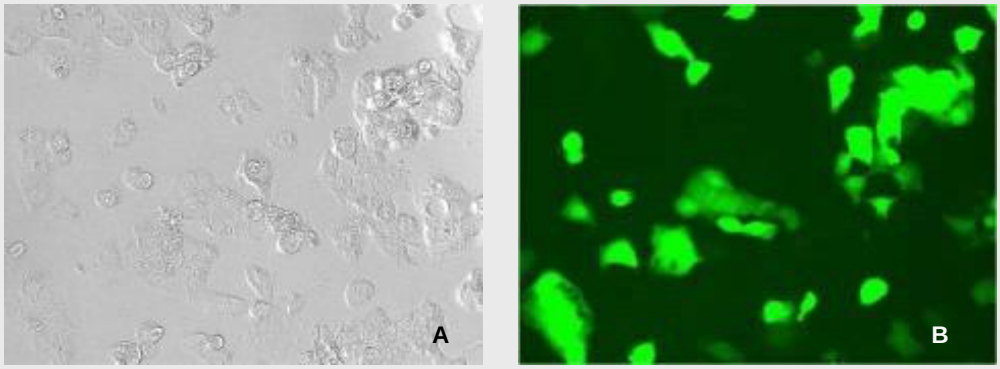
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1005	35	2	5×10^6	90%	87%	10 µl
1005	35	2	5×10^6	79%	92%	100 µl

II. Cell information

Cell type / Description	HeLa (Epithelial cells / Cervial cacinoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Cervix
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

Hep G2, Liver



Hep G2 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

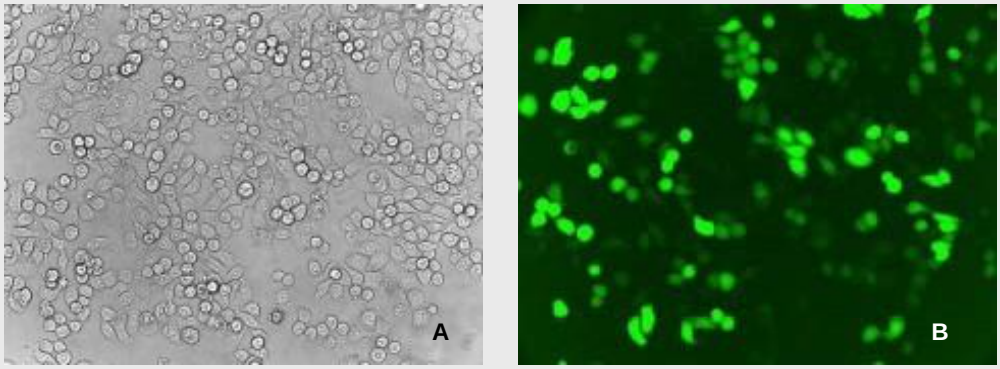
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1200	50	1	5×10^6	60%	90%	10 µl
1230	20	3	5×10^6	59%	95%	10 µl
1050	30	2	1×10^7	70%	85%	10 µl
1100	40	1	1×10^7			
1200	20	2	1×10^7			
1300	20	2	1×10^7			

II. Cell information

Cell type / Description	Hep G2 (Liver cells / Human hepatocellular cacinoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Liver
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

Hep-3B, Liver



Hep-3B cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

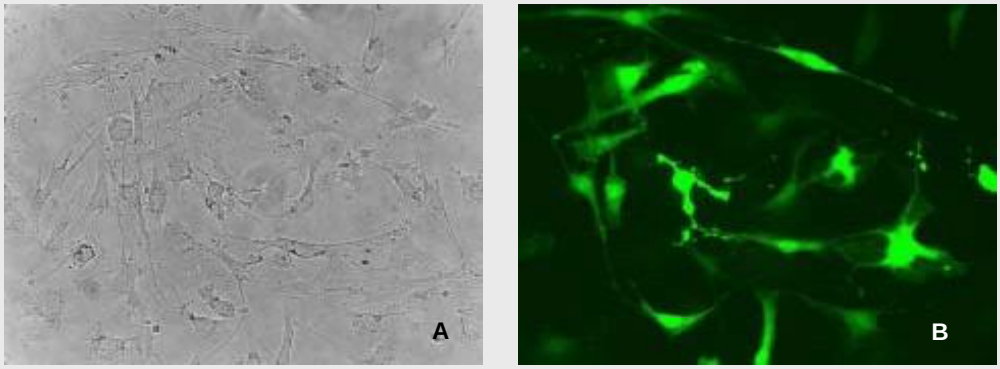
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1275	40	1	5×10^6	70%	70%	10 µl

II. Cell information

Cell type / Description	Hep-3B (Liver cells / Human hepatocellular cacinoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Liver
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate + 10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

HiB5, Brain



HiB5 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

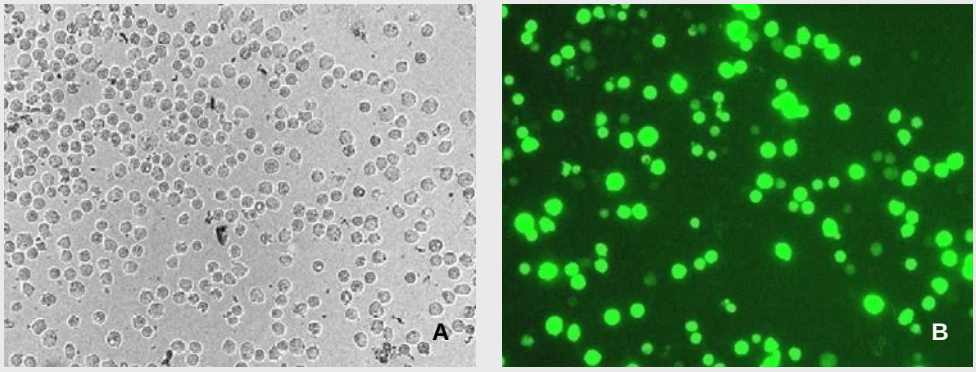
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1000	30	2	5×10^6	76%	80%	10 µl
1000	50	1	5×10^6	75%	75%	10 µl

II. Cell information

Cell type / Description	HiB5 (Hippocampal cells, Cell line)
Characteristics / Species	Adherent / Rat
Tissue Origin	Brain
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate + 10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

HL-60, Blood



HL-60 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

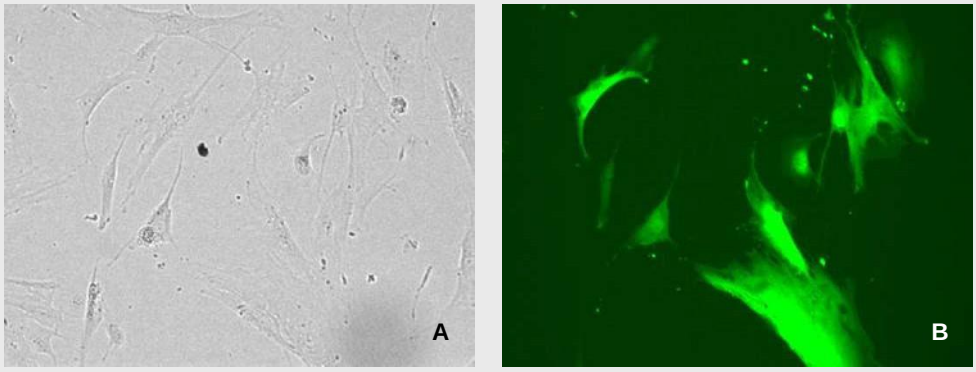
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1350	35	1	5×10^6	55%	70%	10 µl

II. Cell information

Cell type / Description	HL-60 (Blood / Immune cells / Human acute myeloid leukemia, Cell line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	Lymphoblast
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

hMSC, Bone marrow



hMSC (Human Mesenchymal Stem Cells) cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

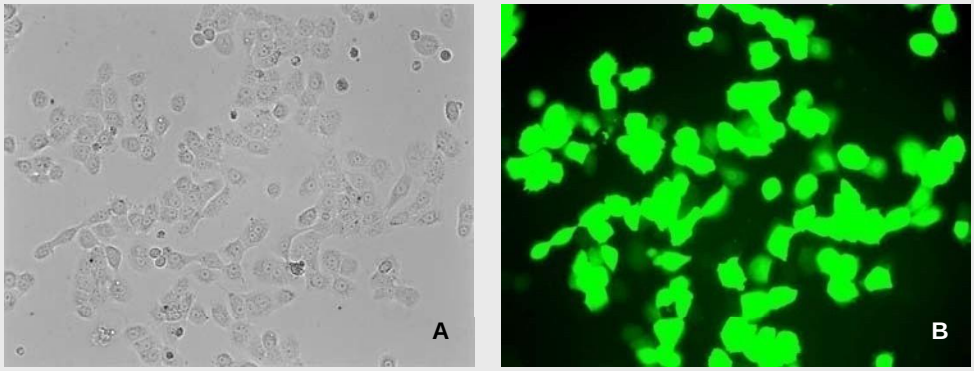
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
990	40	1	5×10^6	54%	90%	10 µl

II. Cell information

Cell type / Description	hMSC (Human mesenchymal stem cells, Stem cells)
Characteristics / Species	Adherent / Human
Tissue Origin	Bone Marrow
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 1000 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Fibroblast
Double time	About 72 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

HN3, Head & Neck



HN3 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

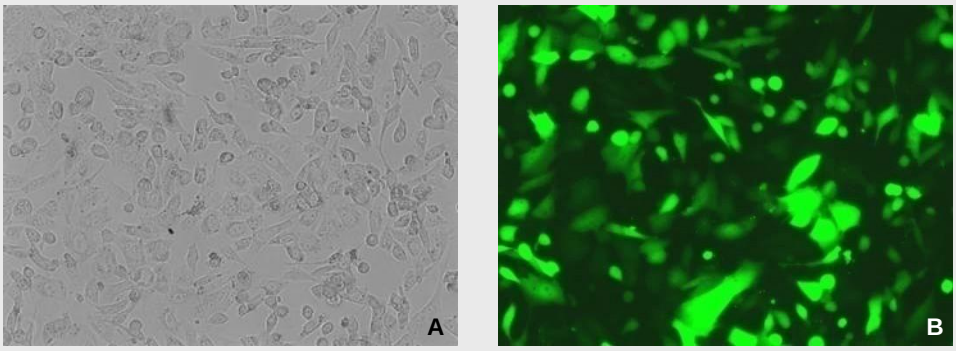
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1650	20	1	5×10^6	83%	70%	10 µl
1850	15	1	5×10^6	75%	80%	10 µl
1800	10	2	5×10^6	85%	80%	10 µl

II. Cell information

Cell type / Desription	HN3 (Head & Neck carcinoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Head & Neck
Media	Alpha minimum essential medium with ribonucleosides and deoxyribonucleosides+10% FBS
Morphology	Epithelial
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

HOS, Bone



HOS cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 48hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

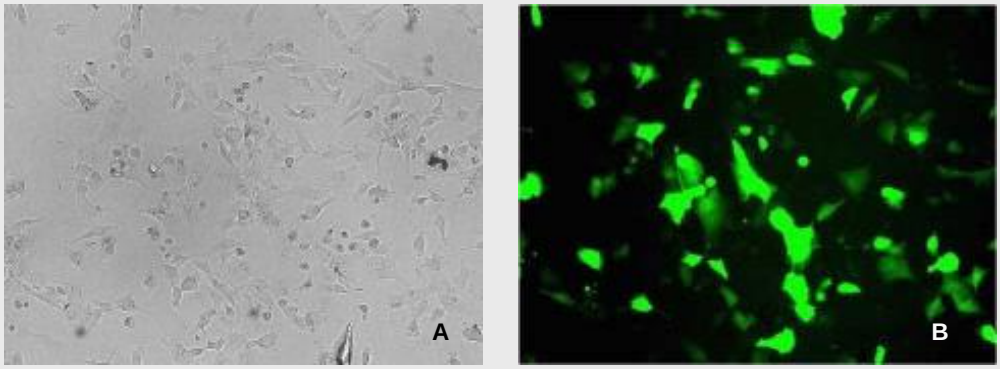
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1050	40	1	5×10^6	70%	75%	10 µl
1300	20	2	5×10^6	85%	56%	10 µl

II. Cell information

Cell type / Description	HOS(bone cells / cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Bone
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Mixed, fibroblast and epithelial like cells
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

Hs-578T, Breast



Hs-578T cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

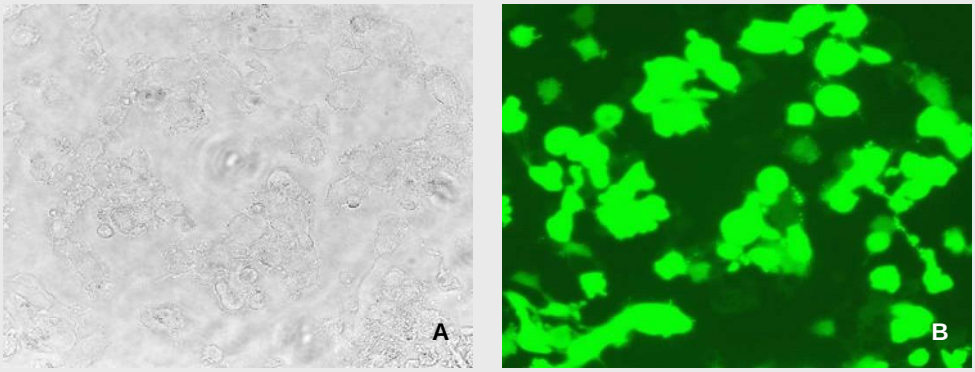
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1290	30	1	5×10^6	86%	86%	10 µl
1050	20	3	5×10^6	85%	85%	10 µl

II. Cell information

Cell type / Description	Hs-578T (Human breast carcinoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Breast (mammary gland)
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

HT-1080, Bone



HT-1080 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

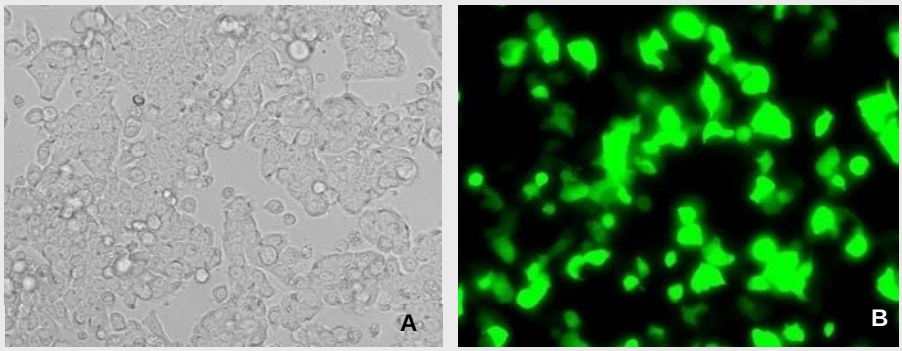
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
950	50	1	5×10^6	85%	70%	10 µl
950	25	3	5×10^6	83%	70%	10 µl

II. Cell information

Cell type / Description	HT-1080 (Bone / Cartilage cells, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Bone
Media	Minimum essential medium (Eagle), with 2 mM L-glutamine, with Earle's BSS adjusted to contain 1.5 g / L sodium bicarbonate, with 0.1 mM non-essential amino acids, with 1.0 mM sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

HT-29, Colon



HT-29 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP 48 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

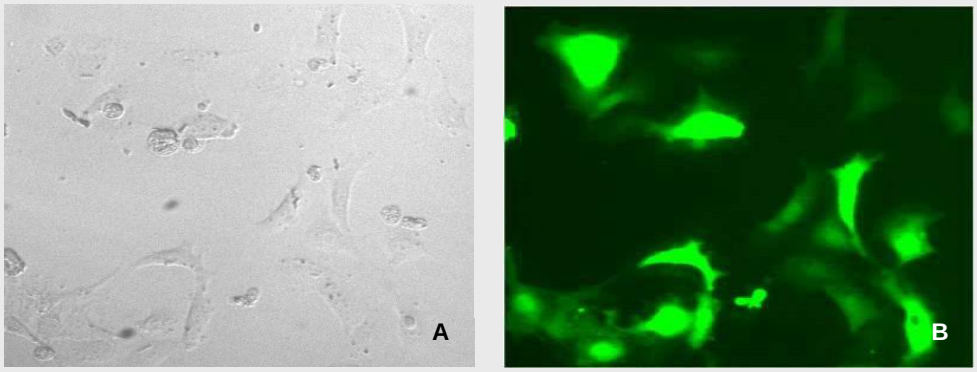
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1300	20	2	5.6 x 10^6	71%	74%	10 µl
1650	10	3	5.6 x 10^6	82%	67%	10 µl
1600	10	3	5.6 x 10^6	69%	53%	100 µl

II. Cell information

Cell type / Description	HT-29 (epithelial Cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Colon
Media	McCoy's 5a medium (modified) with 1.5 mM L-glutamine adjusted to contain 2.2 g / L sodium bicarbonate, 90%; fetal bovine serum 10%
Morphology	Epithelial
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO^2), 5%

HUVEC, Vein



HUVEC (Human Umbilical Vein Endothelial Cells) cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B)**.

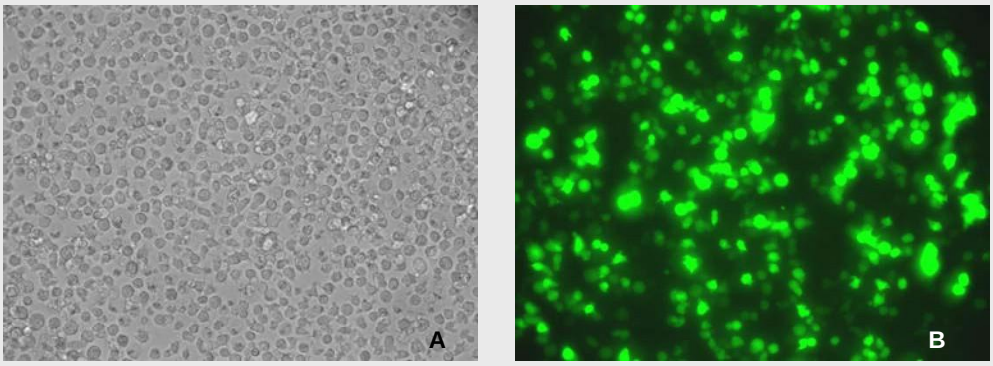
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1350	30	1	5×10^6	80%	70%	10 µl
1200	40	1	5×10^6	75%	70%	10 µl

II. Cell information

Cell type / Description	HUVEC (Endothelial cells, Primary Cell)
Characteristics / Species	Adherent / Human
Tissue Origin	Vein
Media	M199 + ECGS (Endothelial cell growth supplement), with Heparin+ 10% FBS
Morphology	Endothelial
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

IM-9, Blood



IM-9 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

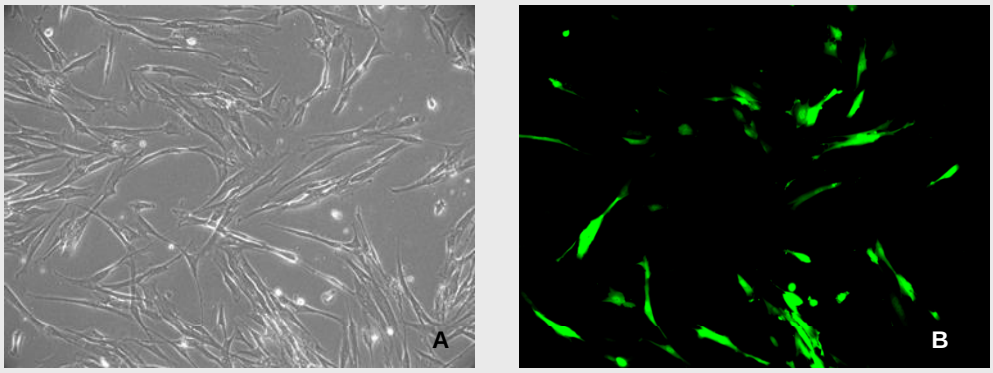
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1700	20	1	5.6×10^6	80%	80%	10 µl
1400	20	2	5.6×10^6	74%	90%	10 µl
1700	20	1	5.6×10^7	88%	70%	100 µl

II. Cell information

Cell type / Description	IM-9 (Blood, Cell Line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI 1640 with 2mM L-glutamine + 10mM HEPES + 10% FBS
Morphology	Lymphoblast
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

IMR-90, Lung



IMR-90cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

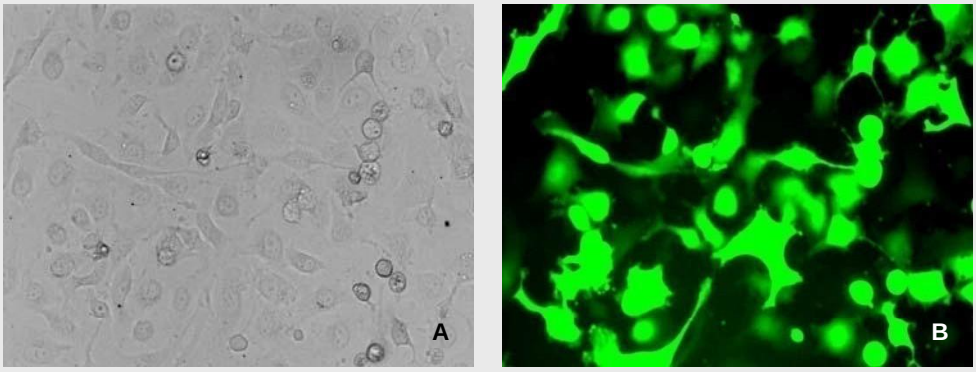
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1100	30	1	1×10^7	88%	88%	10 µl
1100	40	1	1×10^7	84%	88%	10 µl
1500	30	1	1×10^7	74%	95%	100 µl

II. Cell information

Cell type / Description	IMR-90 (Lung Cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Lung
Media	EMEM medium with 2 mM L-glutamine adjusted to contain 1.5 g / L sodium bicarbonate, 1.0 mM sodium pyruvate, 0.1 mM nonessential amino acids, 90%; fetal bovine serum, 10%
Morphology	Fibroblast
Double time	-
Subculturing	Medium renewal:2 to 3 times per week
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

J82, Bladder



J82 cells were transfected using ExTransfection™ and 0.5 ug of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscope (**B**).

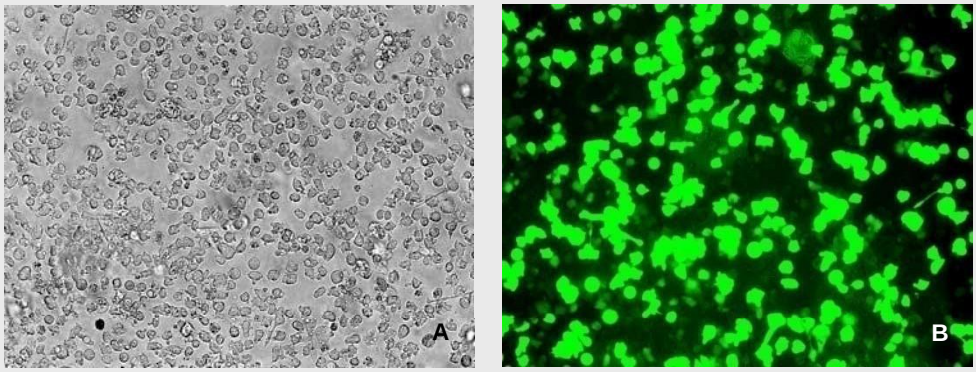
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1350	20	2	7×10^6	74%	69%	10 µl
1050	30	2	7×10^6	74%	70%	10 µl
1100	30	2	5×10^7	78%	69%	100 µl

II. Cell information

Cell type / Description	J82 (Bladder carcinoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Bladder
Media	RPMI1640,[with 4500 mg / L D-glucose, with L-glutamine, with 10ml HEPES, 1mM sodium pyruvate, 1500mg / L-sodium bicarbonate]+10% FBS
Morphology	Epithelial
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

Jiyoye, Blood



Jiyoye cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

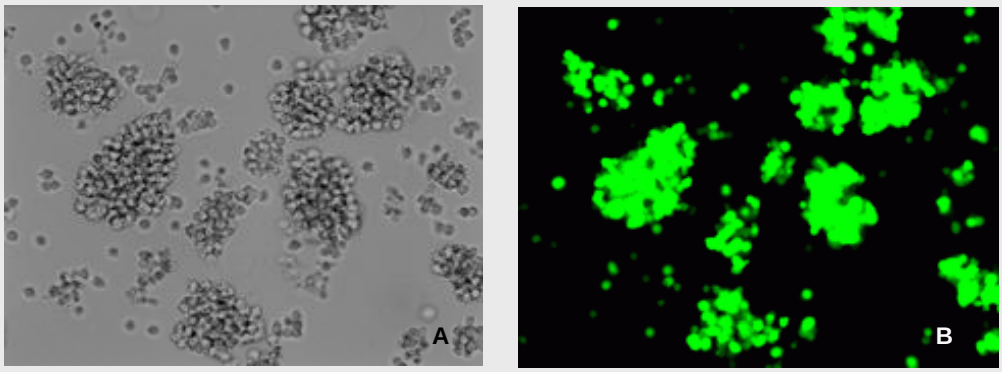
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1400	30	1	7.6×10^6	73%	65%	10 µl
1600	20	1	7.6×10^6	70%	75%	10 µl

II. Cell information

Cell type / Description	Jiyoye (Blood cells, Cell Line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	Lymphoblast
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

Jurkat, Blood



Jurkat cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

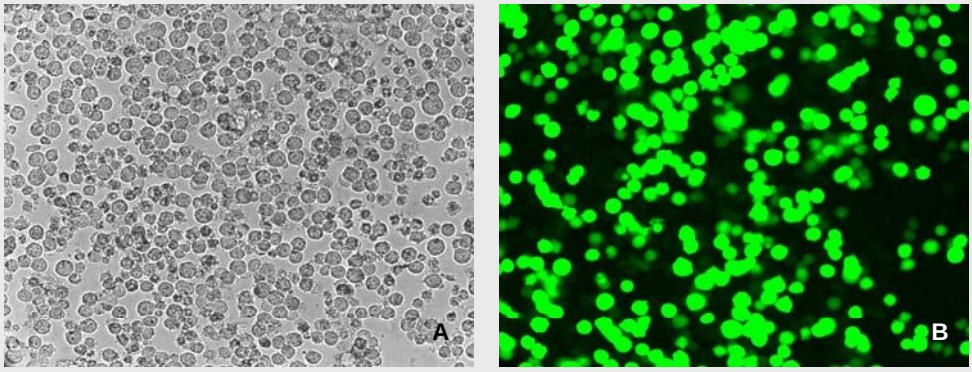
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1380	30	1	5×10^6	60%	48%	10 µl
1410	30	1	5×10^6	77%	85%	100 µl
1600	20	1	2.5×10^7	92%	90%	10 µl
1700	20	1	2.5×10^7	90%	90%	10 µl
1400	30	1	2.5×10^7	90%	90%	10 µl
1100	20	4	2.5×10^7			10 µl

II. Cell information

Cell type / Description	Jurkat (Blood / Immune cells / Human T cell leukemia, Cell line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	Round single cell
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

K-562, Blood



K-562 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

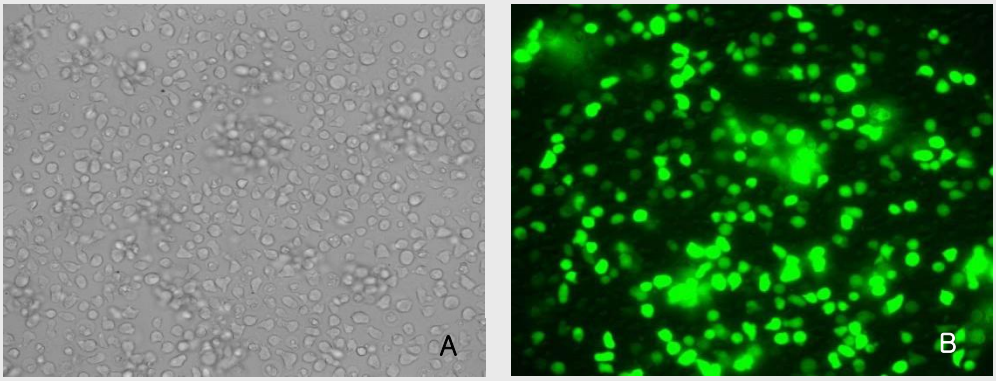
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1000	50	1	1.51×10^7	83%	90%	10 µl
1350	10	4	1.51×10^7	85%	88%	10 µl
1450	10	3	1×10^7	90%	90%	10 µl

II. Cell information

Cell type / Description	K-562 (Human CML-derived B cell like)
Characteristics / Species	Suspension / Human
Tissue Origin	Kidney
Media	RPMI 1640, with L-glutamine + 10% FBS
Morphology	Lymphoblast
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

KG-1a, Blood



KG-1a cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

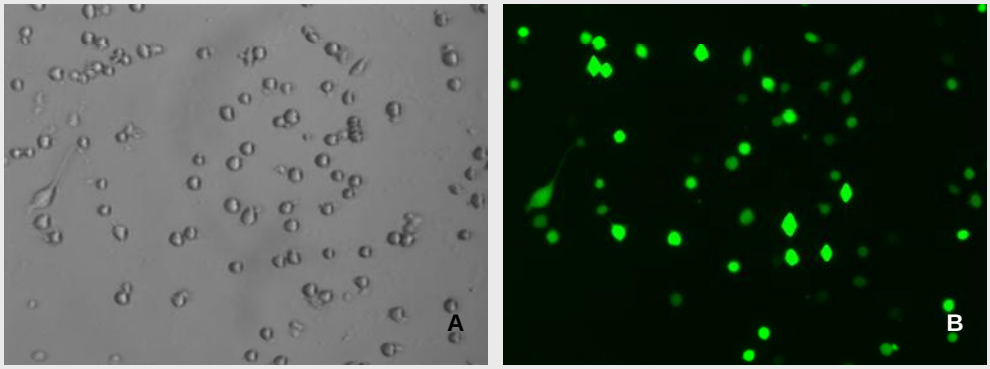
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1650	20	1	5.6×10^6	73%	77%	10 µl
1800	15	1	5.6×10^6	73%	70%	10 µl
1700	20	1	5.0×10^7	76%	83%	100 µl

II. Cell information

Cell type / Description	KG-1a (Blood cell, Cell Line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI 1640 with L-glutamine + 20% FBS
Morphology	Myeloblast
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

L-929, Mouse



L929 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

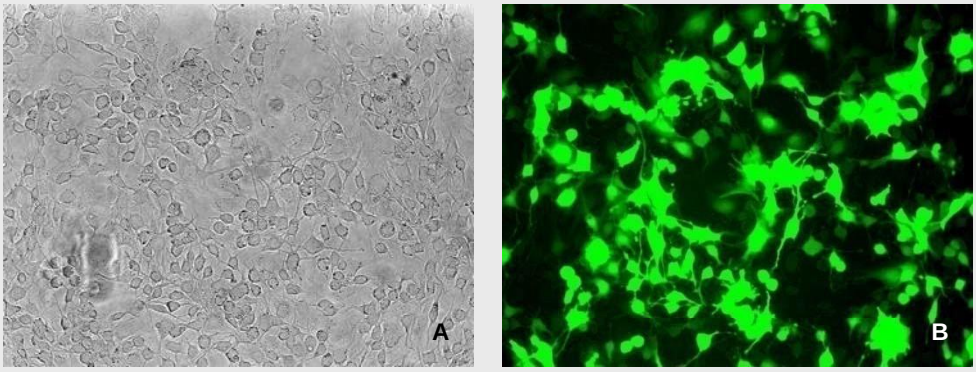
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1600	10	4	1 x 10^5	92.21%	65%	10 µl
1400	20	1	1 x 10^5	67.5%	80%	10 µl
1400	30	1	1 x 10^5	84.41%	80%	10 µl

II. Cell information

Cell type / Description	L-929
Characteristics / Species	Fibrosarcoma / Mouse
Tissue Origin	Mouse
Media	DMEM with 4.5 g / liter glucose, supplemented with 1% penicillin / streptomy cin solution, and 10% FBS.
Morphology	fibroblast
Double time	1.5 day
Subculturing	A subcultivation Ratio of 1:4 to 1:6 is recommended Medium Renewal: Twice per week
Culture condition	37℃ 5%CO2

L6, Muscle



L6 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

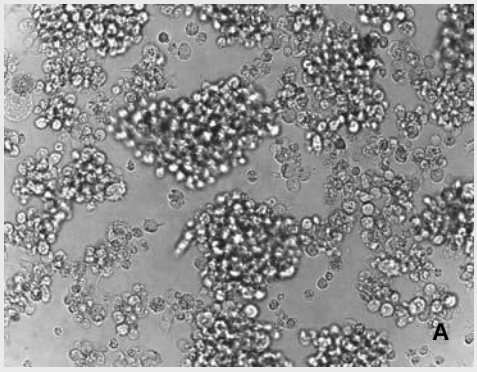
I. Microporation-parameter

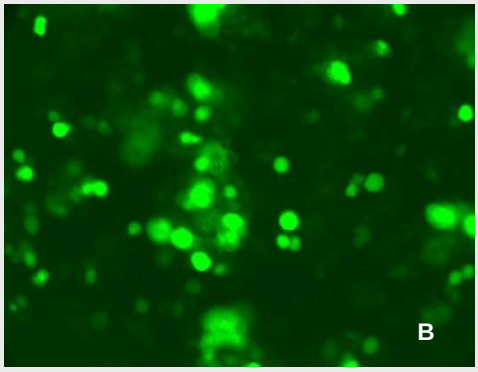
Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1250	30	1	5×10^6	77%	90%	10 µl
1100	30	2	5×10^6	73%	90%	10 µl

II. Cell information

Cell type / Description	L6 (Skeletal muscle myoblast, Cell Line)
Characteristics / Species	Adherent / Rat
Tissue Origin	Skeletal Muscle
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

LCL, Blood





LCL cells were transfected using ExTransfection™ and 0.5 ug of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

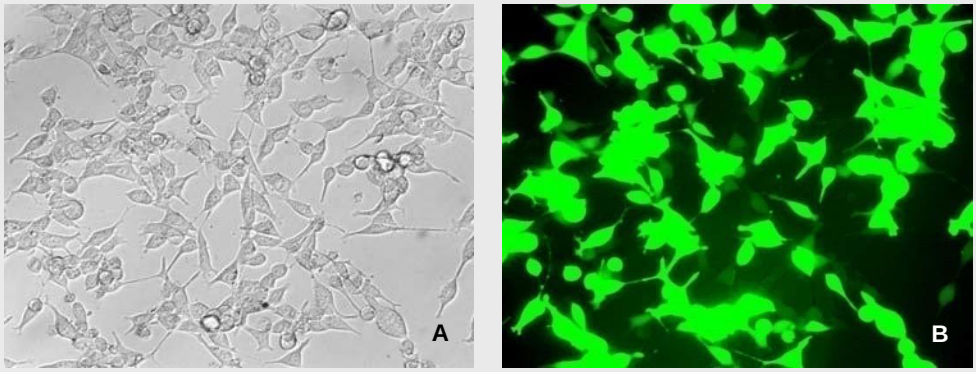
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1350	30	1	1×10^7	80%	80%	10 µl
1100	30	2	1×10^7	80%	80%	10 µl

II. Cell information

Cell type / Description	LCL (EBV-transformed B cells, Cell Line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI 1640 (with L-glutamine)+10% FBS
Morphology	Suspension
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

LNCaP, Prostate



LNCaP cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

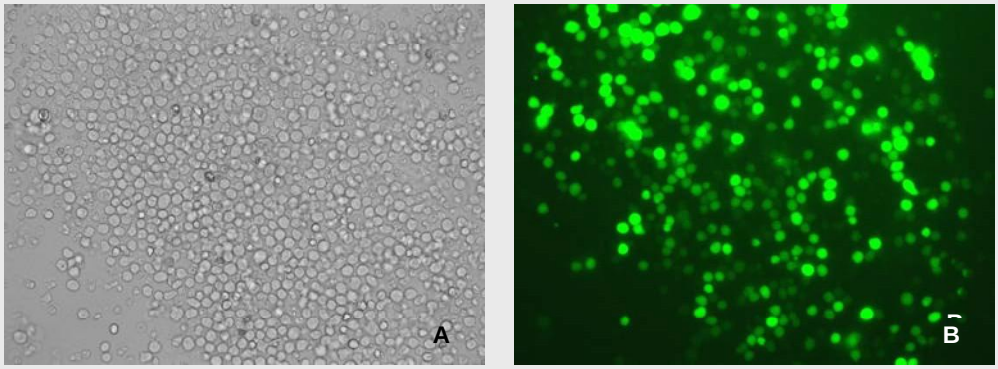
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1200	20	2	7×10^6	89%	90%	10 µl
950	30	2	7×10^6	87%	91%	10 µl
1250	20	2	5×10^7	98%	83%	100 µl

II. Cell information

Cell type / Description	LNCaP (Prostate, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Prostate
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	Epithelial
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

M1, Myeloblast



M1 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B).**

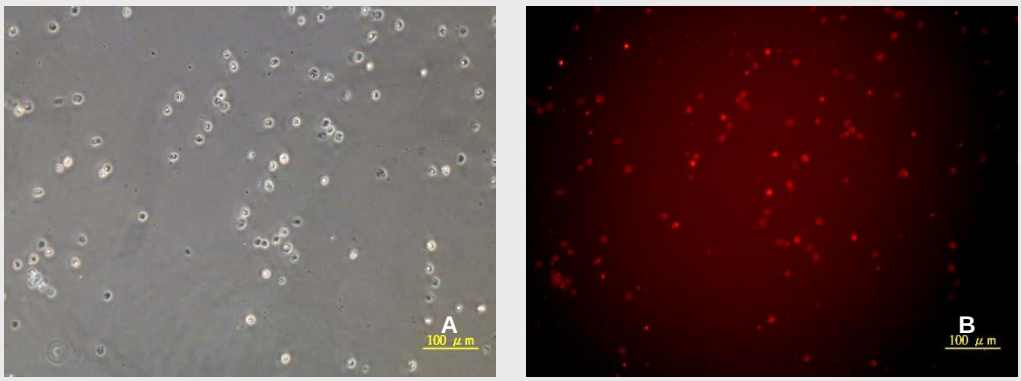
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1350	10	4	5×10^6	41%	45%	10 µl
1400	10	3	5×10^6	30%	61%	10 µl
1550	10	3	5×10^6	36%	51%	10 µl

II. Cell information

Cell type / Description	M1 (leukemia, myeloid / cell line)
Characteristics / Species	Suspension / Mouse
Tissue Origin	Myeloblast ; macrophage like
Media	RPMI-1640 with L-glutamine + 10% FBS
Morphology	Round single cell
Double time	-
Subculturing	Medium renewal:Every 2 to 3 days
Culture condition	37℃ 5% CO_2

Macrophage, Human



Human peritoneal macrophage cells were transfected using ExTransfection™ and 1 µg of a plasmid encoding the RFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B).**

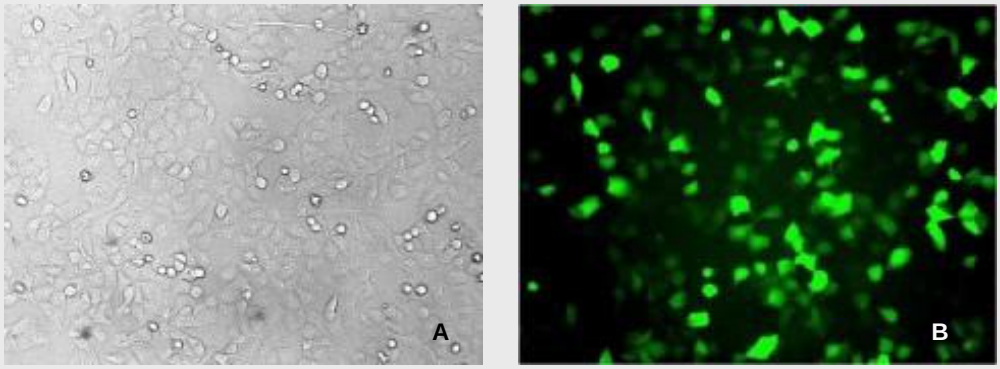
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1900	30	1	1.5 x 10^5	60 %	60 %	10 µl

II. Cell information

Cell type / Description	Human peritoneal macrophage
Characteristics / Species	Primary Culture / Human
Tissue Origin	-
Media	10% FBS DMEM / F12 (without antibiotic)
Morphology	Round
Double time	Non-prolifeRate
Subculturing	Primary culture (can not subculture)
Culture condition	Fresh isolated from Human peritoneal fluid and did Microporation and then culture for 24hr in 10% FBS DMEM / F12 (without antibiotic). Washed unat tached cells before observing under fluorescence microscopy.

MCF-ADR, Breast



MCF-ADR cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B).**

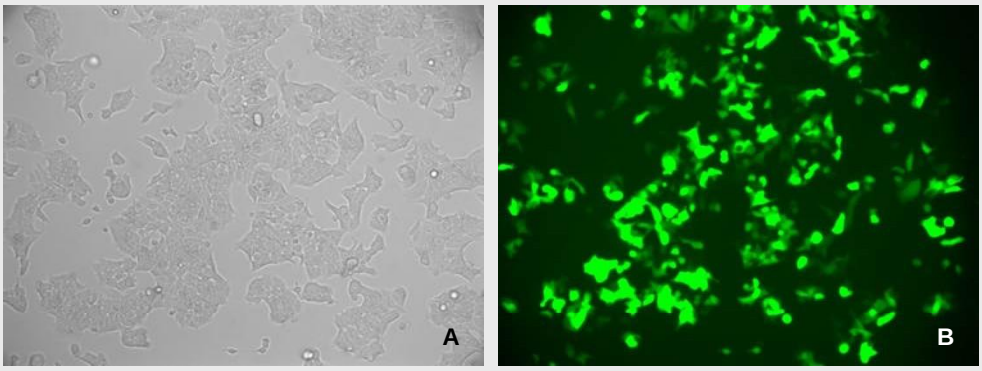
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1500	4	4	5×10^6	65%	90%	10 µl
1500	5	4	5×10^6	63%	85%	10 µl

II. Cell information

Cell type / Description	MCF-ADR (Adriamycin-resistant breast cancer cell, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Breast
Media	RPMI 1640 (with L-glutamine)+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

MCF7, Breast



MCF7 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B).**

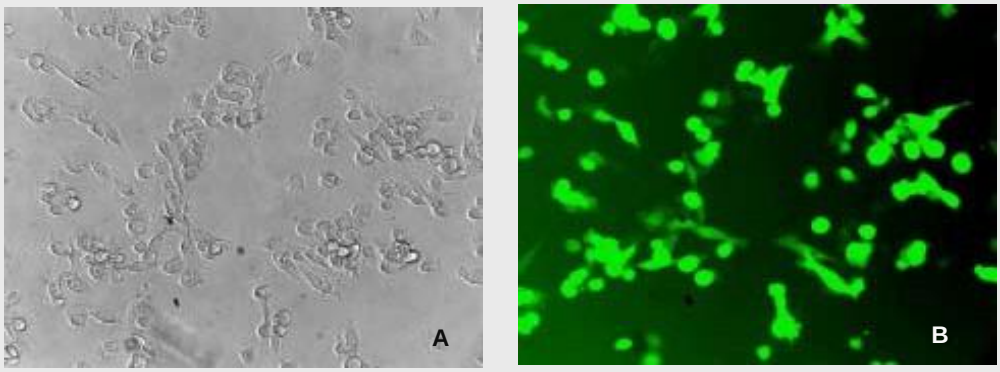
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1250	20	2	5 x 10^6	70%	75%	10 µl
950	40	2	5 x 10^6	70%	70%	10 µl
1100	30	2	5 x 10^7	70%	80%	100 µl
1050	30	2	1 x 10^7	95%	95%	10 µl
1500	10	3	1 x 10^7	95%	90%	10 µl
1400	10	3	1 x 10^7			10 µl
1300	10	3	1 x 10^7			10 µl

II. Cell information

Cell type / Description	MCF7 (epithelial, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Breast
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

MDA-MB-231, Breast



MDA-MB-231 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

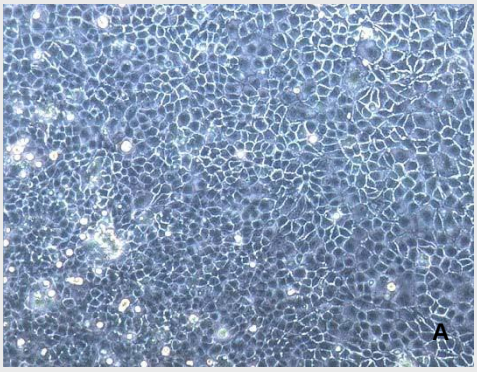
I. Microporation-parameter

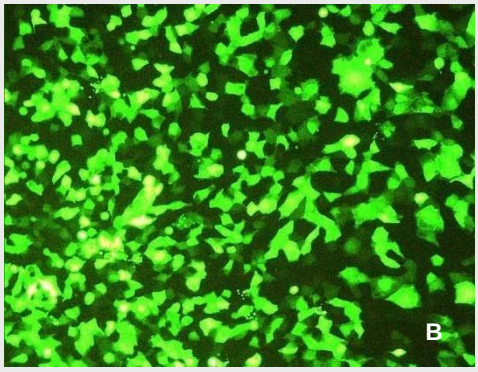
Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1400	10	4	5×10^6	78%	80%	10 µl
1350	20	2	5×10^6	78%	70%	10 µl
1400	10	4	2.62×10^7	80%	80%	10 µl

II. Cell information

Cell type / Description	MDA-MB-231 (Breast adenocarcinoma cells, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Breast
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

MDCK, Kidney





MDCK cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

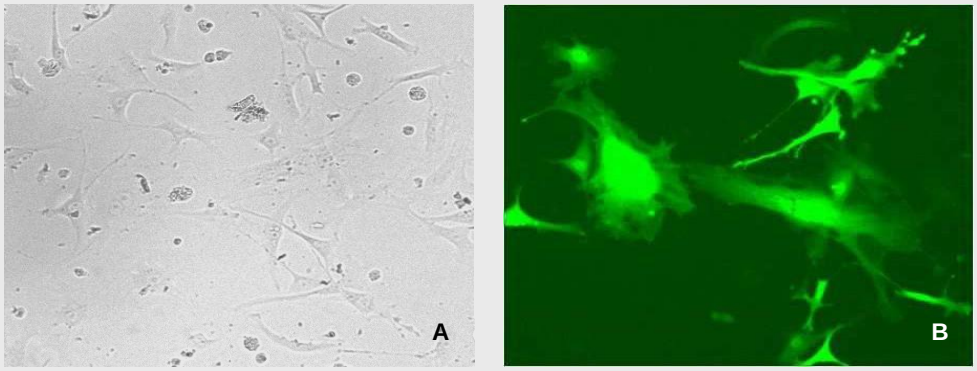
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1650	20	1	5×10^6	90%	90%	10 µl

II. Cell information

Cell type / Description	MDCK (Kidney cells, Cell line)
Characteristics / Species	Adherent / Dog
Tissue Origin	Kidney
Media	Minimum essential medium (Eagle), with 2 mM L-glutamine, with Earle's BSS adjusted to contain 1.5 g / L sodium bicarbonate, with 0.1 mM non-essential amino acids, with 1.0 mM sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

MEF, Embryo



MEF (Mouse Embryonic Fibroblast) cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B)**.

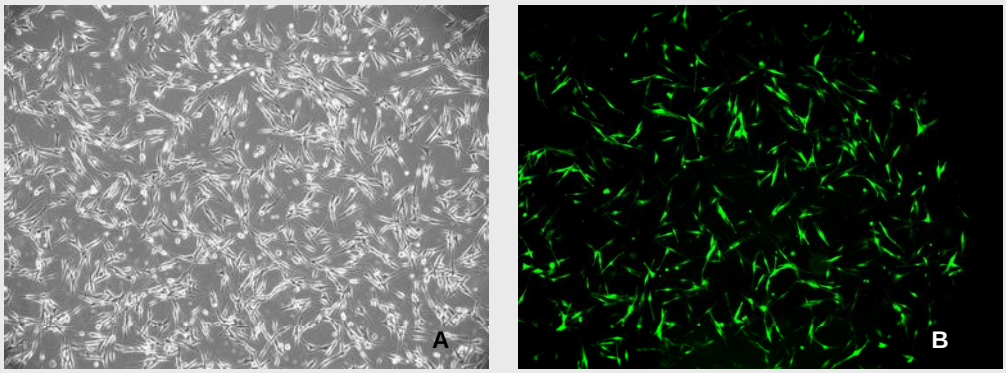
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1350	30	1	5×10^6	80%	75%	10 µl
1650	20	1	5×10^6	80%	70%	10 µl

II. Cell information

Cell type / Description	MEF (Fibroblasts / Mouse embryonic fibroblast, Primary cell)
Characteristics / Species	Adherent / Mouse
Tissue Origin	Embryo
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Fibroblast
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

MeWo, Skin



MeWocells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

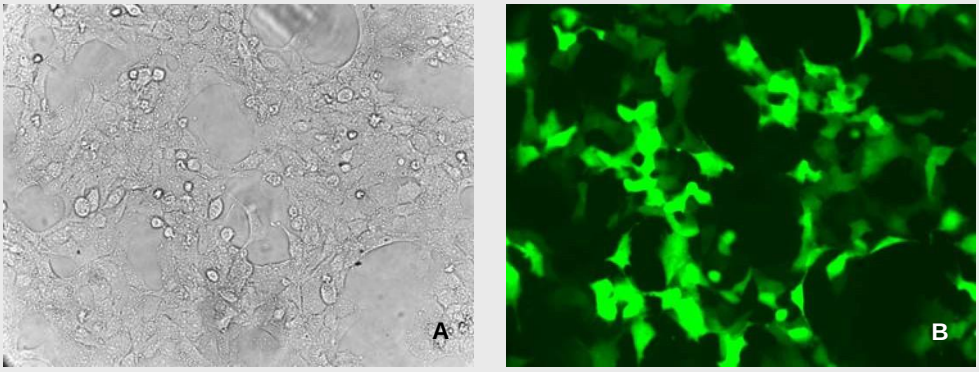
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1600	10	3	1×10^7	71%	80%	10 µl
1500	10	3	1×10^7	79%	76%	100 µl
1600	10	3	1×10^7	87%	64%	100 µl

II. Cell information

Cell type / Description	MeWo (skin Cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Skin (derived from metastatic site: lymph node)
Media	EMEM medium with 2 mM L-glutamine adjusted to contain 1.5 g / L sodium bicarbonate, 1.0 mM sodium pyruvate, 0.1 mM nonessential amino acids, 90%; fetal bovine serum, 10%
Morphology	Fibroblast
Double time	
Subculturing	Medium renewal:Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

MH7A, Others



MH7A cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

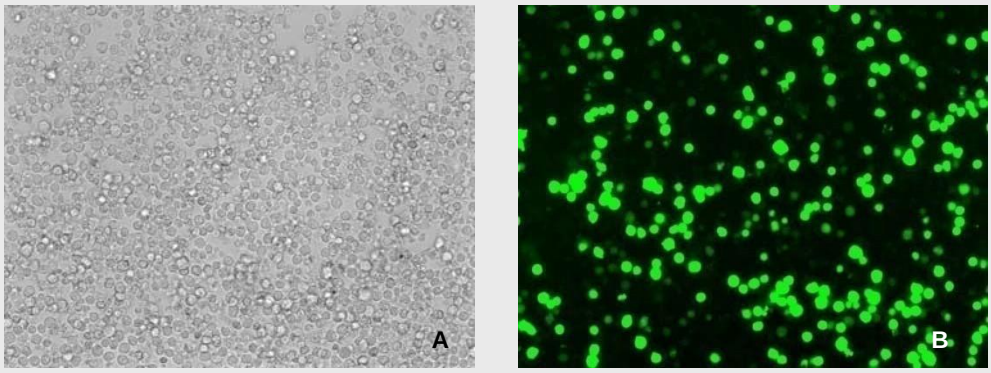
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
880	35	2	5×10^6	62%	85%	10 µl
875	60	1	5×10^6	62%	85%	10 µl
900	60	1	2×10^7	60%	80%	10 µl

II. Cell information

Cell type / Description	M7HA (Rheumatoid synovial cells, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Knee joint
Media	RPMI 1640, with L-glutamine+10% FBS
Morphology	Fibroblast-like
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

MPC-11, Blood



MPC-11 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

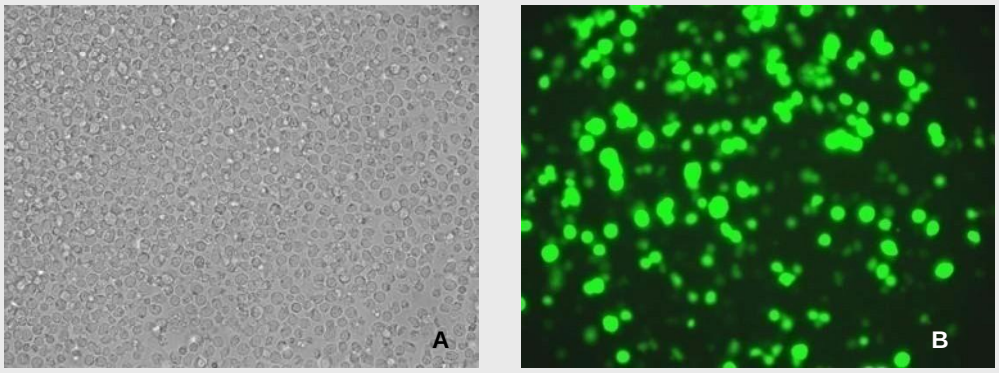
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1300	20	2	7.6×10^6	35%	92%	10 µl
1350	30	1	7.6×10^6	29%	90%	10 µl
1400	30	1	7.6×10^6	41%	82%	100 µl

II. Cell information

Cell type / Description	MPC-11 (Blood Cells, Cell Line)
Characteristics / Species	Suspension / Mouse
Tissue Origin	Blood
Media	Dulbecco's modified Eagle's medium with 4 mM L-glutamine adjusted to contain 1.5 g / L sodium bicarbonate and 4.5 g / L glucose, 90%; heat-inactivated horse serum, 10%
Morphology	Lymphoblast
Double time	17 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

NAMALWA, Blood



NAMALWA cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

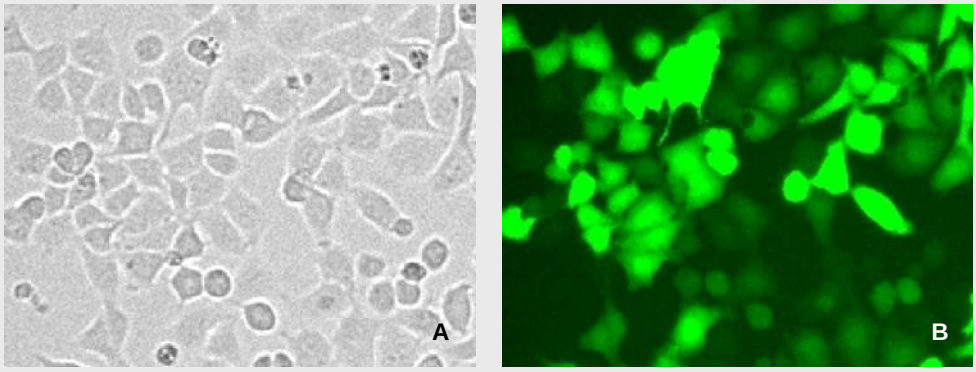
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1100	20	3	5.6×10^6	48%	73%	10 µl
1400	20	2	5.6×10^6	44%	82%	10 µl
1350	20	2	5.6×10^7	52%	79%	100 µl

II. Cell information

Cell type / Description	NAMALWA (Blood, Cell Line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI 1640 with 2mM L-glutamine + 10mM HEPES + 10% FBS
Morphology	Lymphoblastoid
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

NCI-H23, Lung



NCI-H23 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 48 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

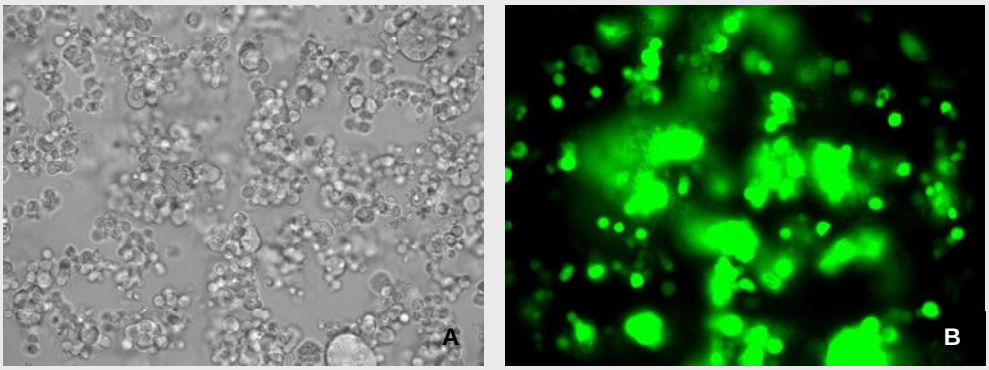
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1300	10	3	5×10^6	94%	81%	10 µl
1050	40	1	5×10^6	91%	78%	10 µl
1350	10	3	5×10^6	95%	94%	100 µl

II. Cell information

Cell type / Description	NCI-H23 (Adenocarcinoma lung cells, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Lung
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	Epithelial
Double time	38 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

NCI-H69, Lung



NCI-H69 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

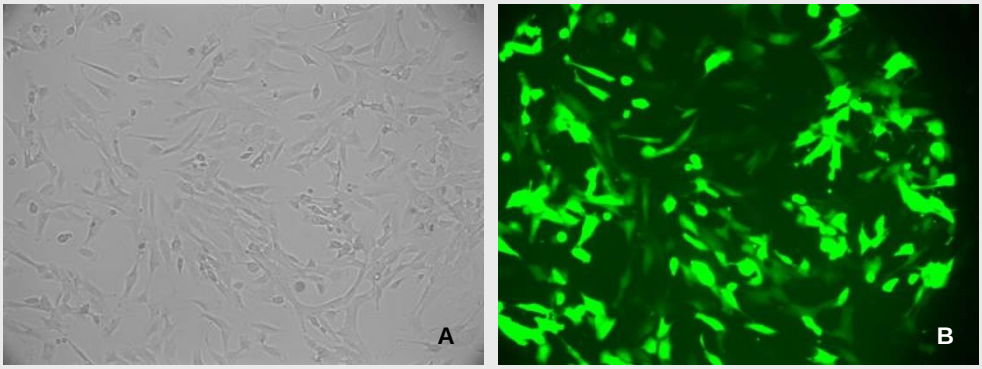
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1300	20	2	5 x 10^6	40%	50%	10 µl
1200	30	1	5 x 10^6	35%	50%	10 µl

II. Cell information

Cell type / Description	NCI-H69 (epithelial, Cell Line)
Characteristics / Species	Suspension / Human
Tissue Origin	Lung
Media	RPMI1640,[with 4500 mg / L D-glucose, with L-glutamine, with 10ml HEPES, 1mM sodium pyruvate, 1500mg / L-sodium bicarbonate]+10% FBS
Morphology	Floating aggregates
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

NIH-3T3, Embryo



NIH-3T3 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

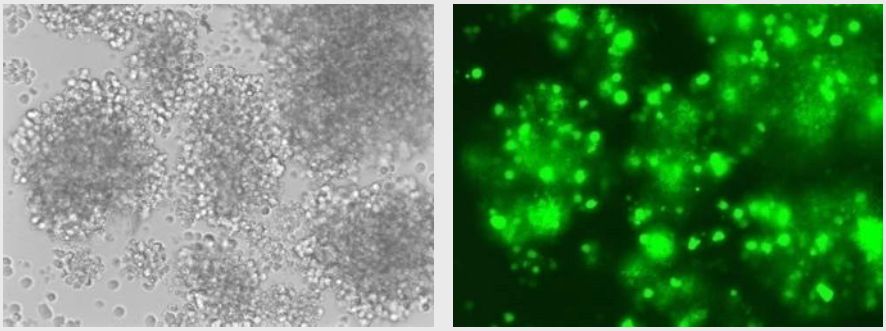
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1400	20	2	5 x 10^6	85%	80%	10 µl
1200	20	3	5 x 10^6	85%	80%	10 µl
1350	20	2	5 x 10^7	80%	77%	100 µl
1700	20	1	1 x 10^7	75%	75%	10 µl
1200	40	1	1 x 10^7	75%	75%	10 µl

II. Cell information

Cell type / Description	NIH-3T3 (Swiss NIH embryonic fibroblast,, Cell Line)
Characteristics / Species	Adherent / Mouse
Tissue Origin	Embryo
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Fibroblast
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

NK-92, Natural killer



NK-92 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 48 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

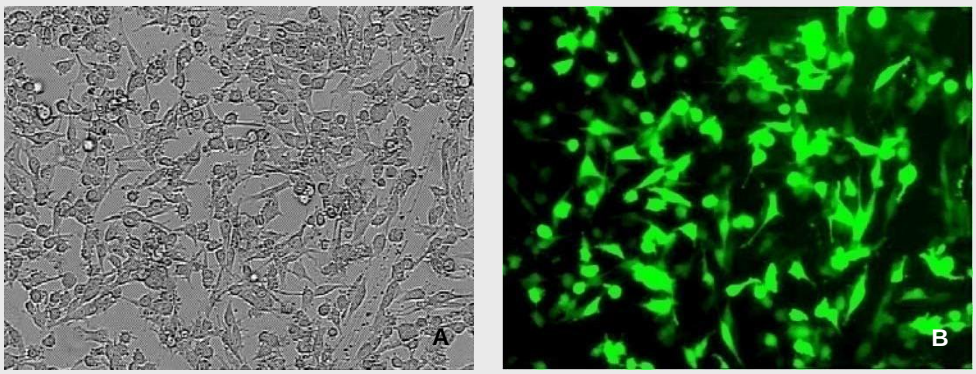
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1300	10	3	1 x 10^6	29%	55%	10 µl
1200	10	4	1 x 10^6	29%	55%	10 µl
1250	10	3	1 x 10^6	17%	70%	100 µl

II. Cell information

Cell type / Description	NK-92(Blood / Immune Cell, cell line)
Characteristics / Species	Suspension, multicell aggregates / Human
Tissue Origin	Blood
Media	Alpha-MEM without ribonucleosides and deoxyribonucleosides but with 2mM L-glutamine and 1.5g / L sodium bicarbonate. Add 0.2mM inositol, 0.1mM 2-mercaptoethanol, 0.02mM folic acid, 100-200U / ml recombinant IL-2, adjust to a final concentRation of 12.5% horse serum and 12.5% fetal bovin serum.
Morphology	Lymphoblast
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

NPA, Thyroid



NPA cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

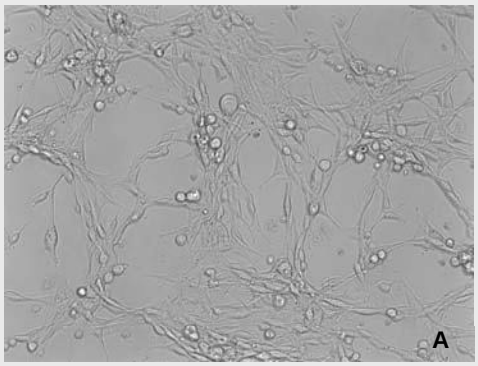
I. Microporation-parameter

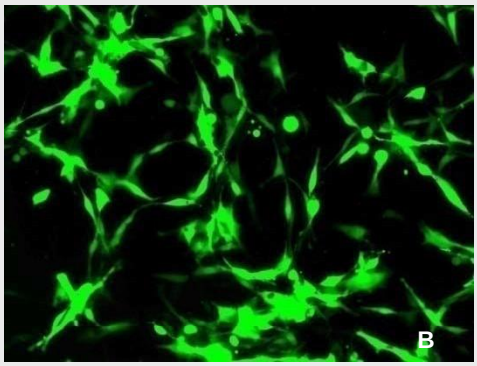
Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1400	30	1	5.6×10^6	75%	88%	10 µl
1400	20	2	5.6×10^6	78%	85%	10 µl

II. Cell information

Cell type / Description	NPA (Thyroid Cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Thyroid
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	Epithelial
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

NRK, Kidney





NRK cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

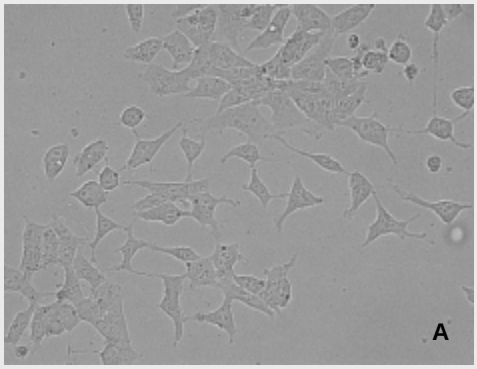
I. Microporation-parameter

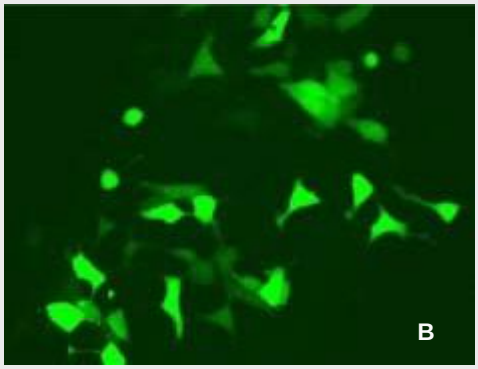
Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1700	10	3	5.6×10^6	75%	89%	10 µl
1650	10	4	5.6×10^6	71%	90%	10 µl
1650	10	3	5.6×10^6	70%	93%	100 µl

II. Cell information

Cell type / Description	NRK (Kidney Cells, Cell Line)
Characteristics / Species	Adherent / Rat
Tissue Origin	Kidney
Media	Dubach's modified Eagle's medium with 4 mM L-glutamine adjusted to contain 1.5 g / L sodium bicarbonate and 4.5 g / L glucose, 90%; fetal bovine serum, 10%
Morphology	Epithelial
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO^2), 5%

P19, Embryo





P19 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

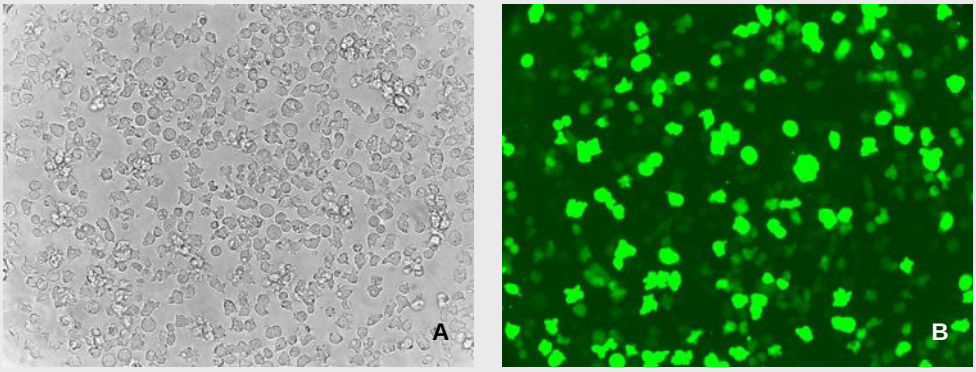
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1275	30	1	5×10^6	90%	80%	10 µl
1125	40	1	5×10^6	88%	80%	10 µl

II. Cell information

Cell type / Description	P19 (Mouse tetrocarcinoma / Embryonal carcinoma, Cell line)
Characteristics / Species	Adherent / Mouse
Tissue Origin	Embryo
Media	Alpha minimum essential medium with ribonucleosides and deoxyribonucleosides+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

P815, Others



P-815 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

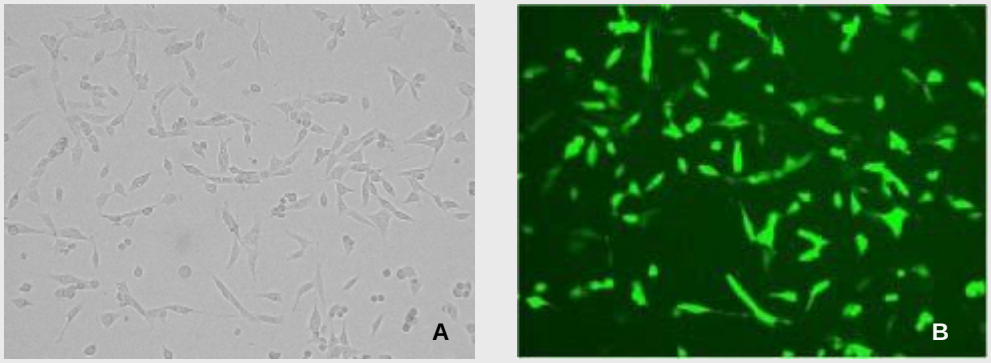
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1000	30	2	5×10^6	87%	85%	10 µl
1000	30	2	2.5×10^7	85%	85%	10 µl

II. Cell information

Cell type / Description	P815 (Mast cell / Mastrocytoma, Cell line)
Characteristics / Species	Suspension / Mouse
Tissue Origin	Mastrocytoma
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate + 10% FBS
Morphology	Suspension
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

PA317, Embryo



PA317 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

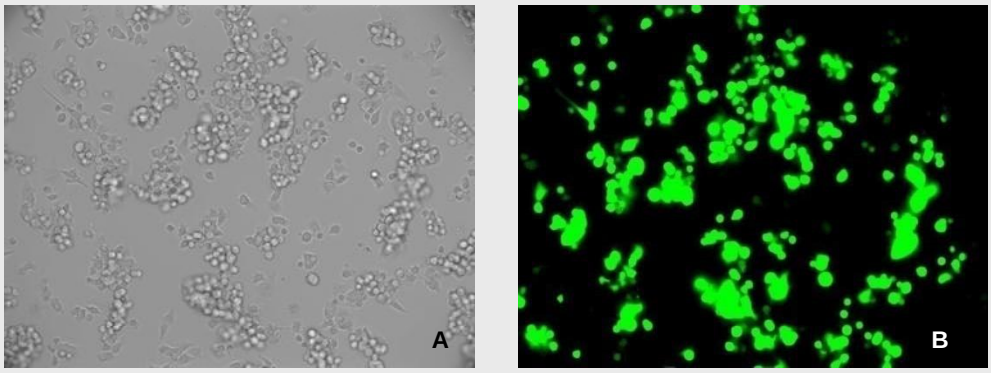
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1320	30	1	5×10^6	90%	99%	10 µl
1600	20	1	1×10^7	90%	95%	10 µl
1200	40	1	1×10^7	90%	90%	10 µl
1050	30	2	1×10^7			

II. Cell information

Cell type / Description	PA317 (Fibroblast, Cell line)
Characteristics / Species	Adherent / Mouse
Tissue Origin	Embryo
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Fibroblast
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

PANC-1, Pancreas



PANC-1 cells were transfected using ExTransfection™ and 0.15 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

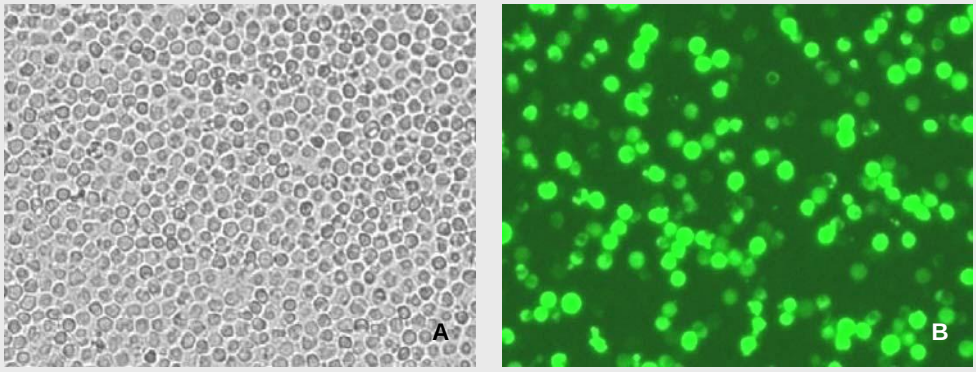
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1000	40	2	5.6×10^6	50%	41%	10 µl
1000	35	2	5.6×10^6	43%	40%	10 µl
1150	30	2	5.6×10^6	70%	68%	100 µl

II. Cell information

Cell type / Description	PANC-1 (Pancreas cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Pancrease
Media	Dubach's modified Eagle's medium with 4 mM L-glutamine adjusted to Contain 1.5 g / L sodium bicarbonate and 4.5 g / L glucose, 90%; fetal bovine serum, 10%
Morphology	Ephithelial
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

PBMC, Blood



PBMC (Peripheral Blood Mononuclear Cells) cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B)**.

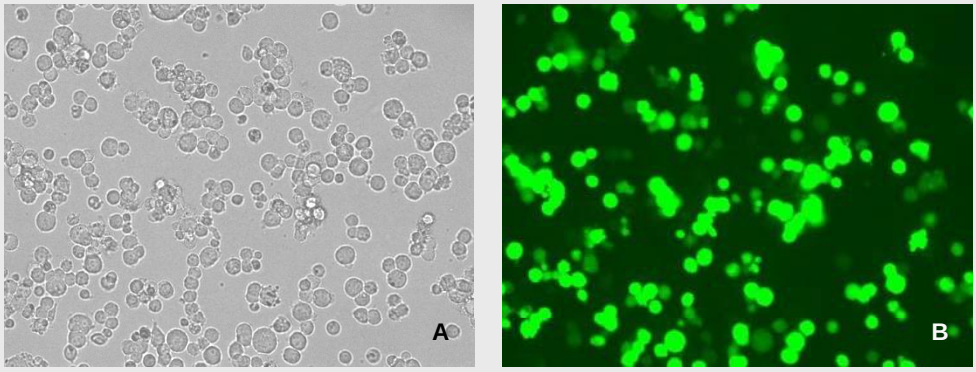
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
2190	20	1	2×10^7	30%	70%	10 µl
2150	20	1	2×10^7	23%	95%	10 µl

II. Cell information

Cell type / Description	PBMC (Peripheral Blood Mononuclear cells, Primary cell)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI-1640, with L-glutamine+10% FBS
Morphology	Round single cell
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

PC-12, Adrenal gland



PC-12 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

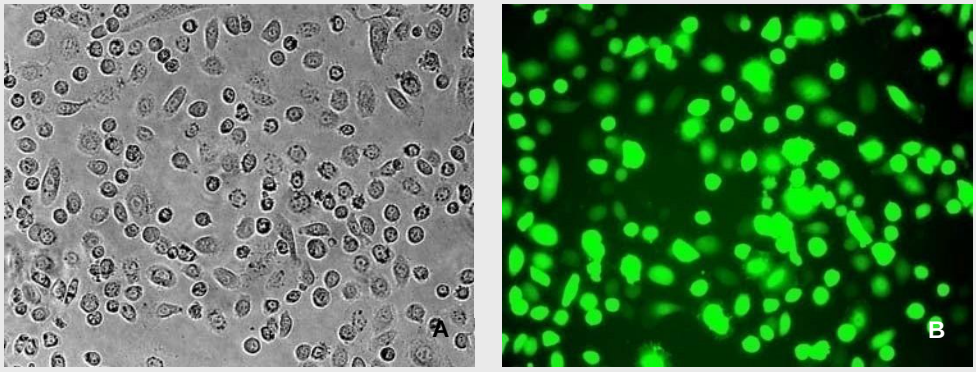
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1410	30	1	5×10^6	68%	95%	10 µl

II. Cell information

Cell type / Description	PC-12 (Rat adrenal pheochromocytoma, Cell line)
Characteristics / Species	Adherent / Rat
Tissue Origin	Adrenal gland
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate + 10% HS + 5% FBS or RPMI-1640 supplemented with 2 mM L-glutamine, with 10 mM Hepes, with 1 mM sodium pyruvate, with 4500 g / l glucose + 5% FBS and 10% horse serum.
Morphology	Polygonal
Double time	92 hr
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

PC-3, Prostate



PC-3 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

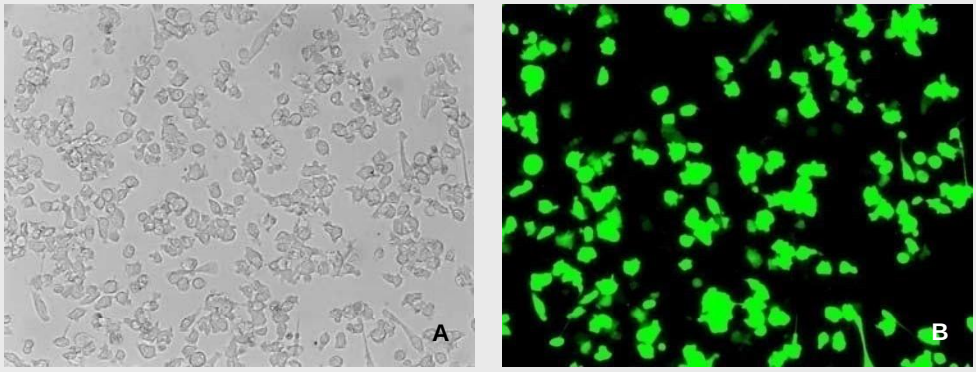
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1250	30	1	5.6×10^6	82%	88%	10 µl
1450	10	3	5.6×10^6	85%	85%	10 µl

II. Cell information

Cell type / Description	PC-3 (Prostate Cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Prostate
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	Epithelial
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

Raji, Blood



Raji cells were transfected using ExTransfection™ and 0.5 ug of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light and fluorescence **(A)** microscope **(B)**.

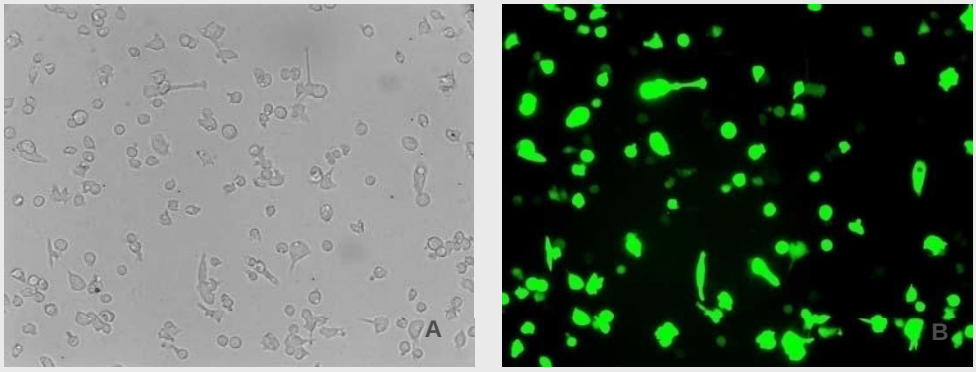
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density	Transfection efficiency	Viability	Tip type
1350	30	1	5.6×10^6	71%	87%	10 µl
1300	30	1	7×10^6	65%	91%	100 µl

II. Cell information

Cell type / Description	Raji (Blood / Immune cell, Cell line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI1640,[with 4500 mg / L D-glucose, with L-glutamine, with 10ml HEPES, 1mM sodium pyruvate, 1500mg / L-sodium bicarbonate]+10% FBS
Morphology	Lymphoblast
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

Ramos(Human), Blood



Ramos cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

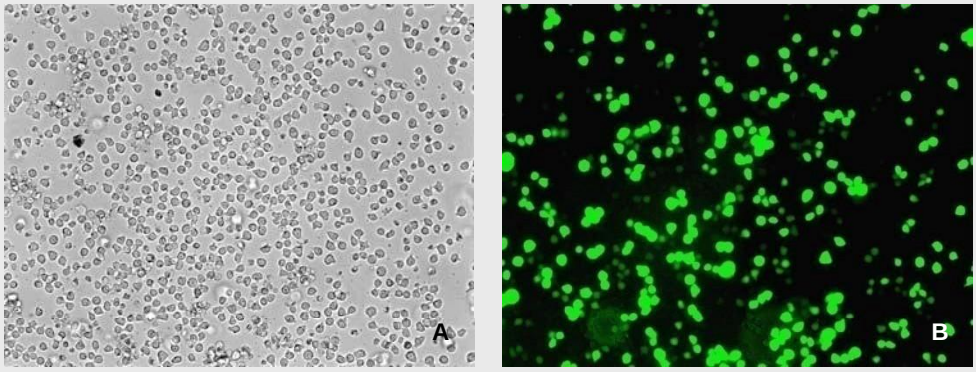
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1350	30	1	7.6×10^6	65%	78%	10 µl
1550	20	1	7.6×10^6	60%	80%	10 µl

II. Cell information

Cell type / Description	Ramos (Blood Cells, Cell Line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	Lymphoblast
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

Ramos(Mouse), Blood



Ramos cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

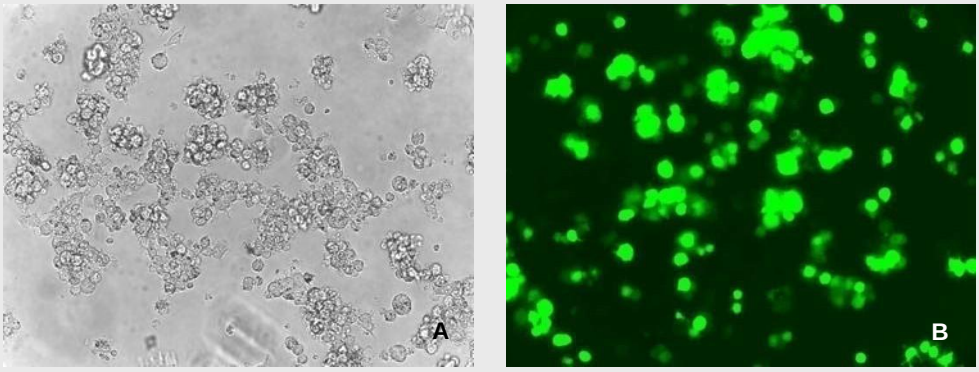
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1300	20	2	7.6×10^6	56%	70%	10 µl
1200	40	1	7.6×10^6	51%	60%	10 µl

II. Cell information

Cell type / Description	Ramos (Blood Cells, Cell Line)
Characteristics / Species	Suspension / Mouse
Tissue Origin	Blood
Media	RPMI-1640, with L-glutamine +5% FBS
Morphology	Lymphoblast
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

Raw 264.7, Blood



Raw 264.7 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

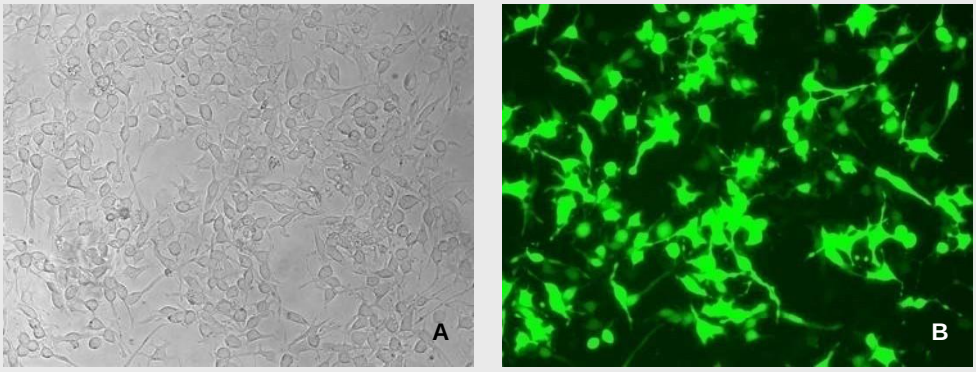
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1680	20	1	5×10^6	74%	80%	10 µl
1720	10	2	5×10^6	70%	80%	10 µl
1680	20	1	6×10^7	70%	80%	10 µl

II. Cell information

Cell type / Description	Raw 264.7 (Blood / Immune cells, Cell line)
Characteristics / Species	Adherent / Mouse
Tissue Origin	Blood
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Monocyte / Macrophage
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37 C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

RBL2H3, Blood



RBL2H3 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

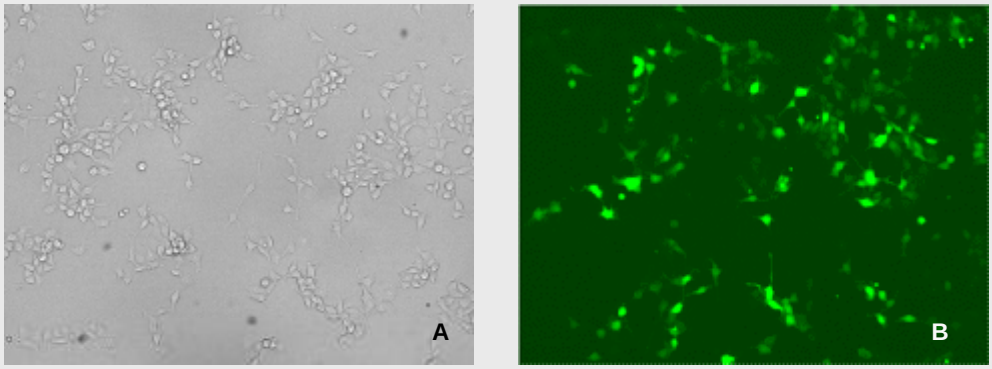
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1150	30	1	5×10^6	74%	90%	10 µl
1200	20	2	5×10^6	76%	90%	10 µl

II. Cell information

Cell type / Description	RBL2H3 (Basic leukemia cell, Cell line)
Characteristics / Species	Adherent / Rat
Tissue Origin	Blood
Media	RPMI 1640, with 1.5 mM L-glutamine, with 2.2 g / L sodium bicarbonate+ 10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

RKO, Colon



RKO cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

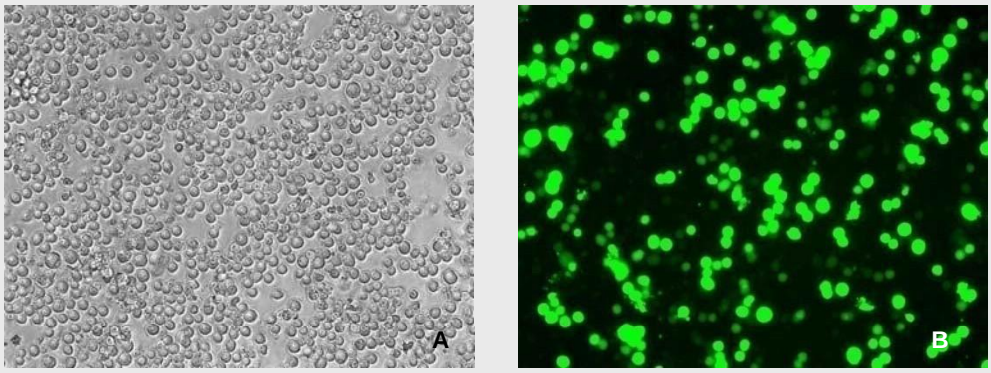
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1320	30	1	5×10^6	73%	75%	10 µl

II. Cell information

Cell type / Description	RKO (Gastrointestinal tact cells / Colorectal carcinoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Colon
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

RPMI8226, Blood



RPMI8226 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

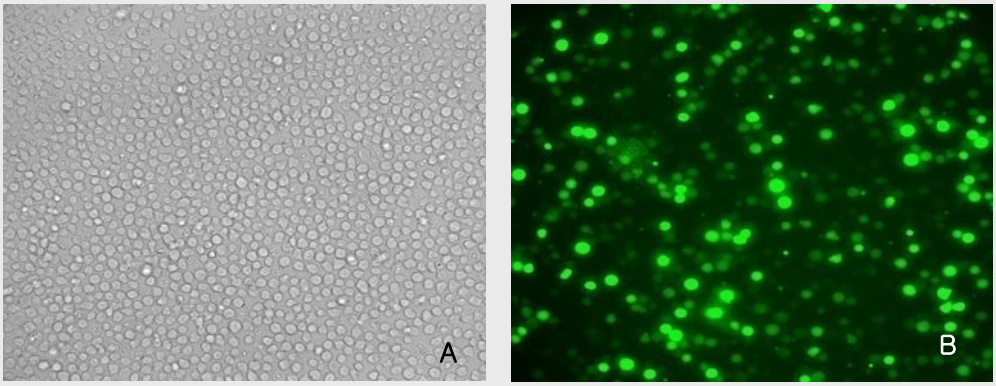
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1150	30	2	5.6×10^6	49%	47%	10 µl
1050	20	3	5.6×10^6	35%	60%	10 µl
1200	20	3	5.6×10^6	30%	55%	100 µl

II. Cell information

Cell type / Description	RPMI8226 (Blood Cells, Cell Line)
Characteristics / Species	Suspension / Human
Tissue Origin	**B**lood
Media	RPMI 1640 medium with 2 mM L-glutamine adjusted to contain 1.5 g / L sodium bicarbonate, 4.5 g / L glucose, 10 mM HEPES, and 1.0 Mm sodium pyruvate, 90%; fetal bovine serum, 10%
Morphology	Lymphoblast
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO^2), 5%

RS4;11, Bone marrow



RS4;11 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

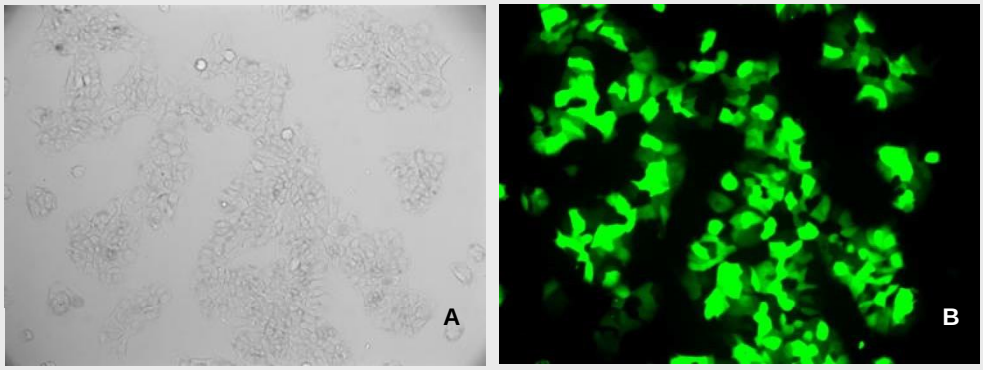
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1750	20	1	5.6×10^6	60%	85%	10 µl
1650	10	4	5.6×10^6	60%	85%	10 µl
1650	10	4	5.6×10^6	60%	85%	100 µl

II. Cell information

Cell type / Description	RS4;11 (Bone marrow, Cell Line)
Characteristics / Species	Suspension / Human
Tissue Origin	Bone marrow
Media	RPMI 1640 with 2mM L-glutamine + 10mM HEPES + 10% FBS
Morphology	Lymphoblast
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

RT4, Bladder



RT4 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B)**.

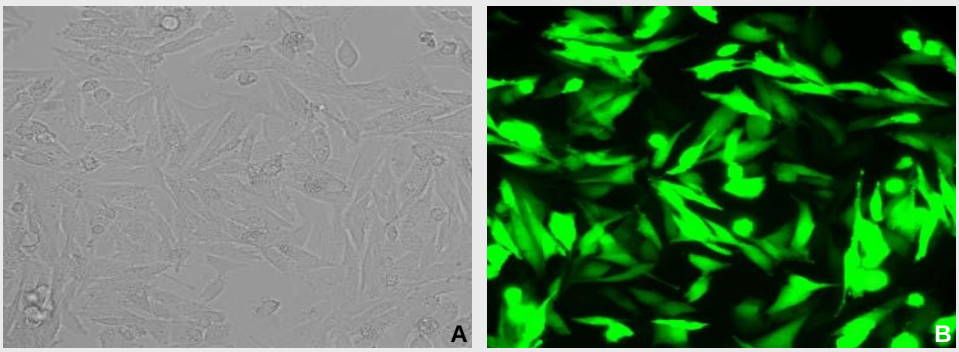
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1100	30	1	5 x 10^6	50%	50%	10 µl
800	50	1	5 x 10^6	50%	55%	10 µl
1050	30	1	5 x 10^7	40%	40%	100 µl

II. Cell information

Cell type / Description	RT4 (Bladder epithelial, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Bladder
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

Saos-2, Bone



Saos-2 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B)**.

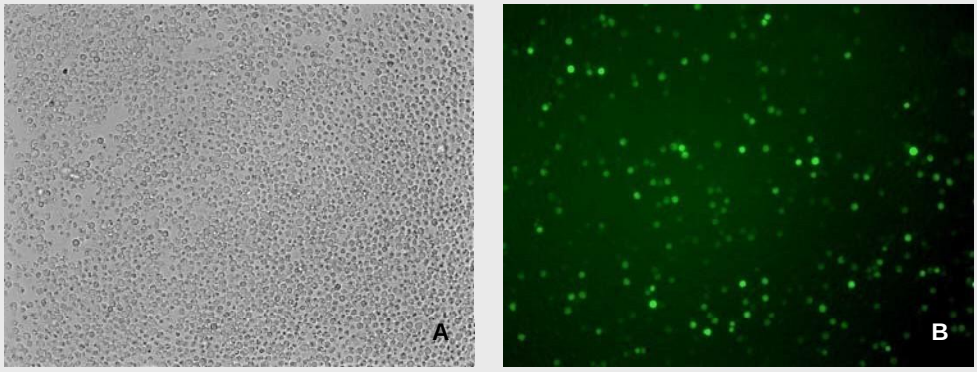
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1200	40	1	5.6×10^6	80%	74%	10 µl
1300	10	3	5.6×10^6	70%	85%	10 µl
1250	40	1	5.6×10^6	72%	85%	100 µl

II. Cell information

Cell type / Description	Saos-2 (connective tissue cells, cell lines)
Characteristics / Species	Adherent / Human
Tissue Origin	Bone
Media	McCoy s 5a medium (modified) with 1.5 mM L-glutamine adjusted to contain 2.2 g / L sodium bicarbonate, 90%; fetal bovine serum 15%
Morphology	Epithelial
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

SCID adh, Thymocyte



SCID adh cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

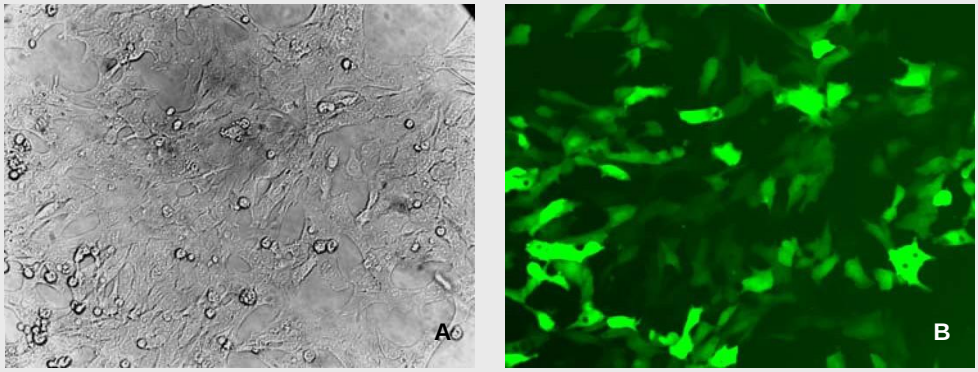
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1500	20	1	7.6×10^6	22%	35%	10 µl
1200	40	1	7.6×10^6	27%	40%	10 µl
1300	30	1	7.6×10^6	24%	30%	10 µl

II. Cell information

Cell type / Description	SCID adh (Thymocyte Cells, Cell Line)
Characteristics / Species	Suspension / Mouse
Tissue Origin	Thymocyte
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	Lymphoblast
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

SCN2.2, Brain



SCN2.2 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

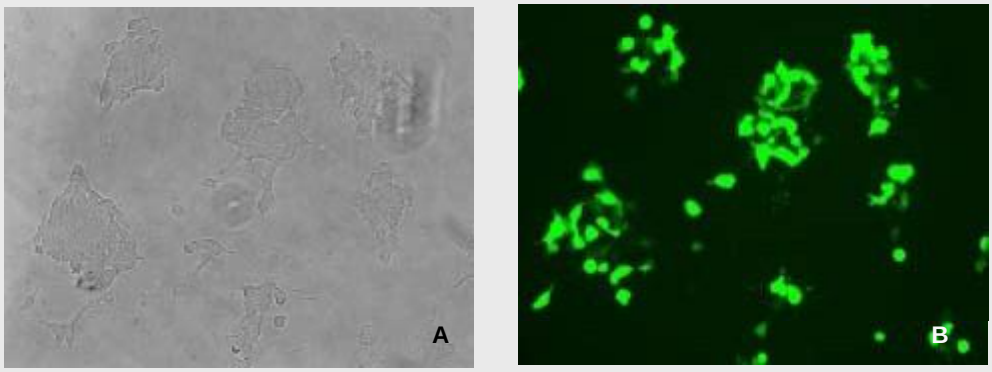
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1350	30	1	5×10^6	85%	85%	10 µl
1200	40	1	5×10^6	80%	90%	10 µl
1350	30	1	2.62×10^7	87%	88%	10 µl

II. Cell information

Cell type / Description	SCN2.2 (Hypothalamus Suprachiasmatic Nucleus, Cell Line)
Characteristics / Species	Adherent / Rat
Tissue Origin	Brain
Media	Minimum essential medium (Eagle), with 2 mM L-glutamine, with Earle's BSS adjusted to contain 1.5 g / L sodium bicarbonate, with 0.1 mM non-essential amino acids, with 1.0 mM sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

SH-SY5Y, Brain



SH-SY5Y cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

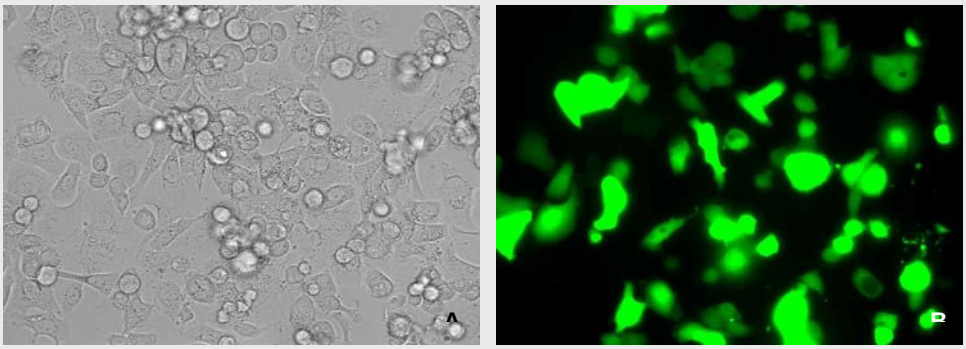
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1100	50	1	5×10^6	64%	70%	10 µl
1200	20	3	5×10^6	64%	80%	10 µl
1050	30	2	1×10^7	95%	70%	10 µl

II. Cell information

Cell type / Description	SH-SY5Y(Neural cells / Human neuroblastoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Brain
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

SK-BR-3, Breast



SK-BR-3 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 48 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

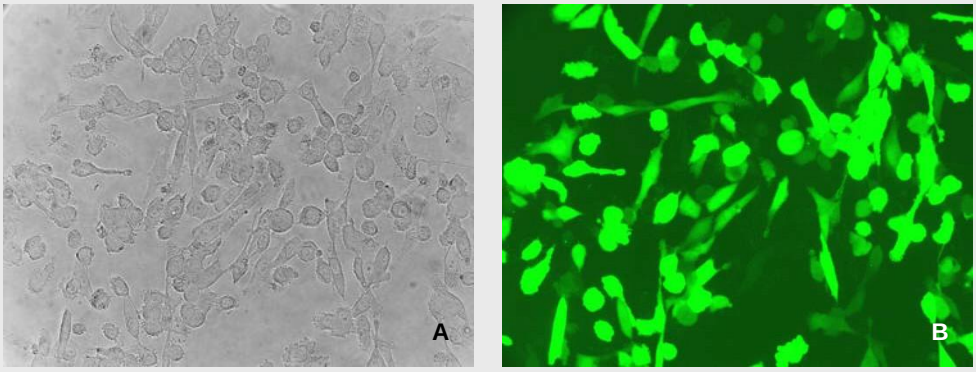
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1050	30	1	5.6×10^6	66%	75%	10 µl
1000	40	1	5.6×10^6	65%	76%	10 µl
1100	30	1	5.6×10^6	63%	66%	100 µl

II. Cell information

Cell type / Description	SK-BR-3 (epitherial, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Breast
Media	DMEM with 4500mg / L, with L-glutamine, with 110mg / L, sodium pyruvate + 10%FBS
Morphology	Epithelial
Double time	-
Subculturing	Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

SK-Hep-1, Liver



SK-Hep-1 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

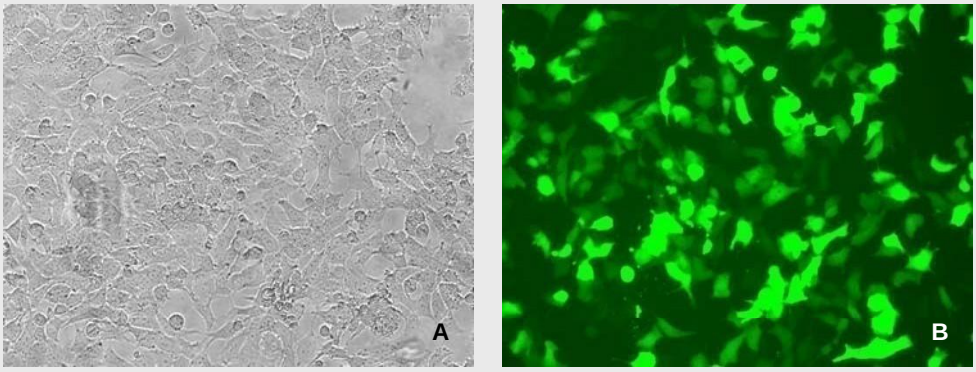
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
870	35	2	5×10^6	86%	80%	10 µl

II. Cell information

Cell type / Description	SK-Hep-1 (Liver cells / Human hepatocellular cacinoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Liver
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate + 10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

SK-N-MC, Brain



SK-N-MC cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

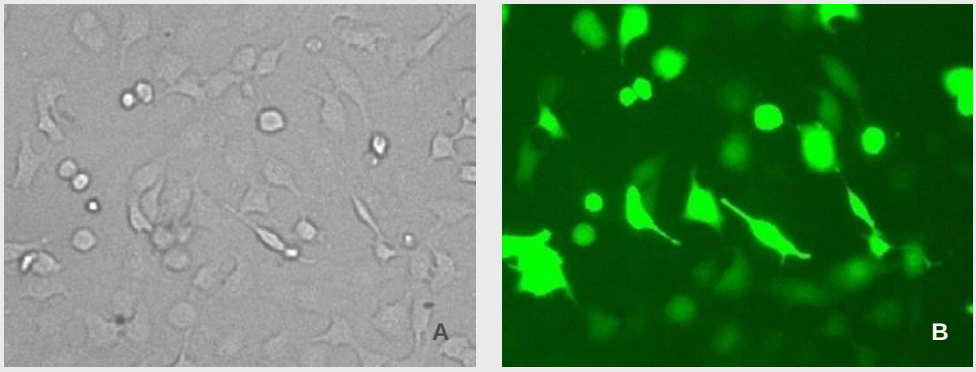
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
900	50	1	5×10^6	84%	80%	10 µl
950	40	1	5×10^6	78%	85%	10 µl

II. Cell information

Cell type / Description	SK-N-MC (Neural cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Brain
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

SK-OV-3, Ovary



SK-OV-3 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

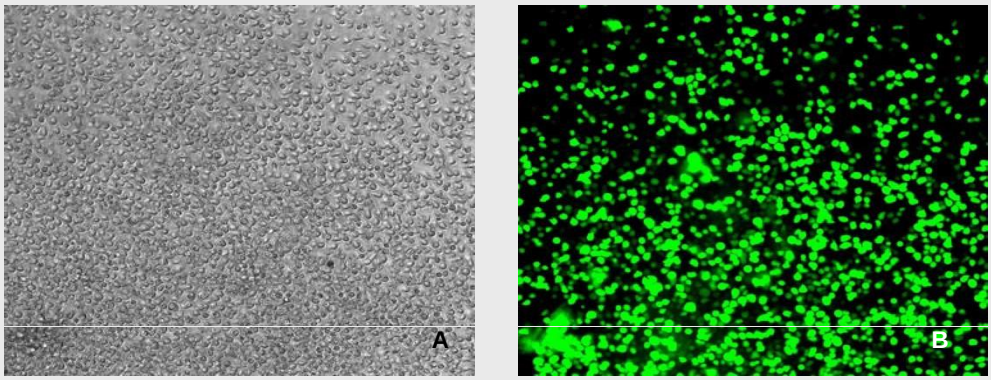
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1170	30	2	5×10^6	93%	94%	10 µl

II. Cell information

Cell type / Description	SK-OV-3 (Dermal cells / Human caucasian ovary Adenocarcinoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Ovary
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

SKW6.4, Blood



ARPE-19 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

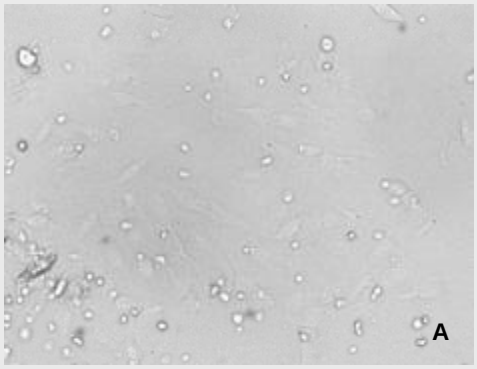
I. Microporation-parameter

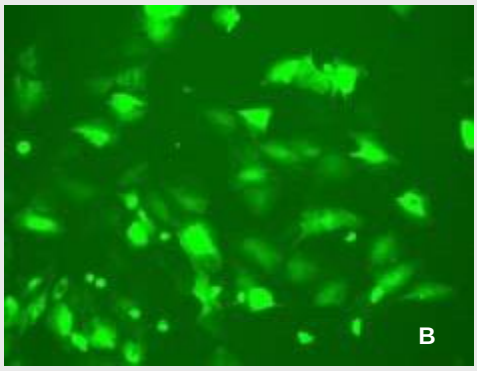
Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1400	20	2	5.6×10^6	87 %	74 %	10 µl
1550	10	4	5.6×10^6	90%	71 %	10 µl
1400	20	2	5.6×10^7	70 %	73 %	100 µl

II. Cell information

Cell type / Description	SKW6.4 (Blood / Immune cells, Cell Line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI 1640 with 2mM L-glutamine + 10mM HEPES + 10% FBS
Morphology	Lymphoblast
Double time	
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

SNU-387, Liver





SNU-387 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

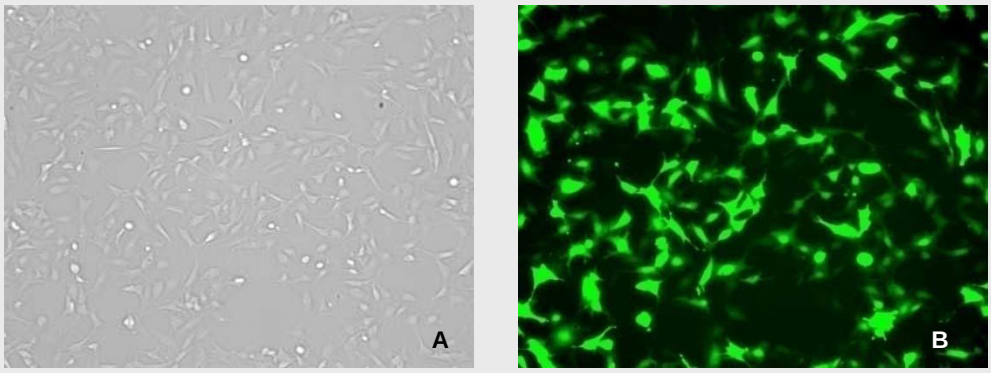
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1575	30	1	5×10^6	80%	85%	10 µl
1350	20	2	5×10^6	85%	80%	10 µl

II. Cell information

Cell type / Description	SNU-387 (Liver cells / Pleomorphic hepatocellular carcinoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Liver
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

SV40 MES 13, Kidney



SV40 MES 13 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

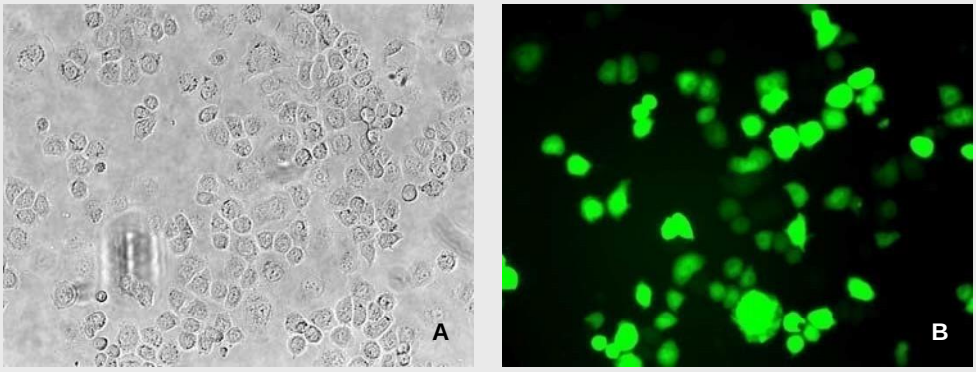
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1450	20	2	7.6×10^6	89%	83%	10 µl
1200	30	2	7.6×10^6	84%	84%	10 µl

II. Cell information

Cell type / Description	SV40 MES 13(Kidney Cells, Cell Line)
Characteristics / Species	Adherent / Mouse
Tissue Origin	Kidney
Media	A 3:1 mixture of Dulbecco's modified Eagle's medium and Ham's F12 medium with 14 mM HEPES, 95%; fetal bovine serum, 5%
Morphology	myofibroblast-like
Double time	26 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

SW-13, Brain



SW-13 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

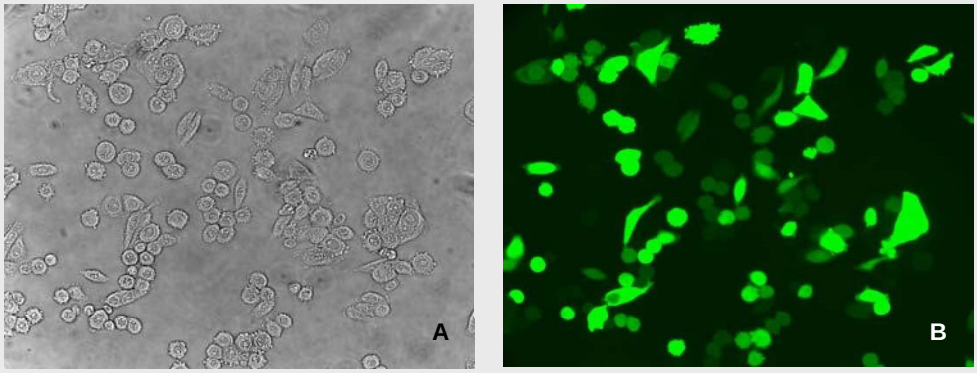
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
800	60	1	5×10^6	56%	80%	10 µl
800	70	1	5×10^6	51%	80%	10 ul

II. Cell information

Cell type / Description	SW-13 (Adenocarcinoma, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Brain
Media	RPMI 1640, with 1.5 mM L-glutamine, with 2.2 g / L sodium bicarbonate+ 10% FBS
Morphology	Epithelial
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

SW480, Colon



SW480 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

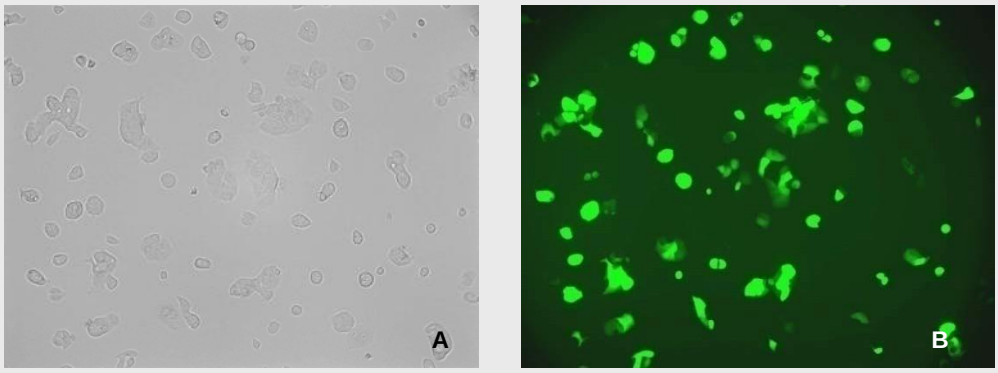
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1550	20	1	5×10^6	82%	88%	10 µl
1350	20	2	5×10^6	80%	80%	10 µl
1350	20	2	2.67×10^7	83%	82%	10 µl

II. Cell information

Cell type / Description	SW480 (Colon cells, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Colon
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

T-47D, Breast



T-47D cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 48 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

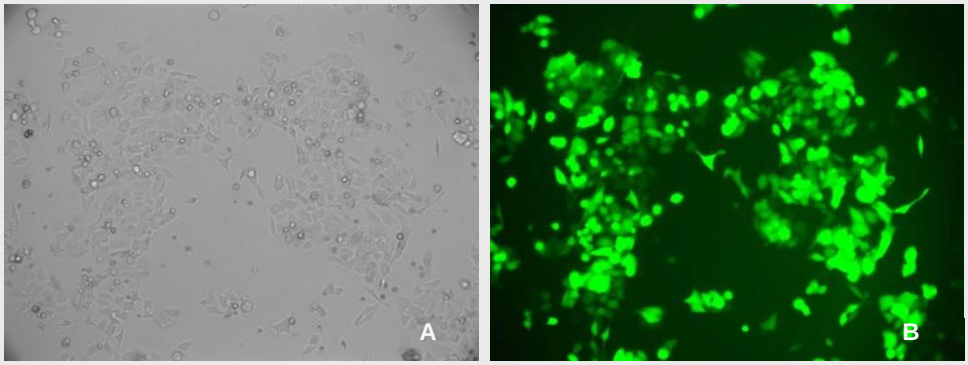
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1750	20	1	5.6×10^6	84%	95%	10 µl
1350	20	2	5.6×10^6	80%	90%	10 µl
1700	20	1	5.6×10^7	77%	90%	100 µl

II. Cell information

Cell type / Description	T-47D (Breast, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Breast
Media	RPMI 1640 with 2mM L-glutamine + 10mM HEPES + 10% FBS + 0.2unit bovine insulin
Morphology	Epithelial
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

T24, Bladder



T24 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light **(A)** and fluorescence microscopy **(B)**.

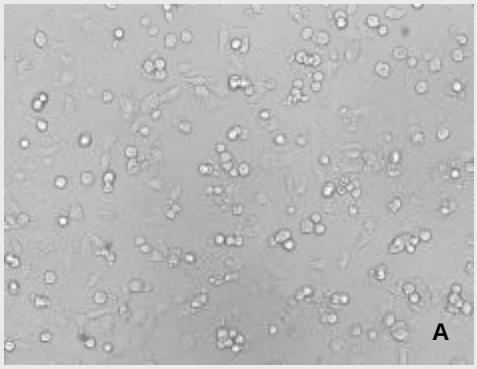
I. Microporation-parameter

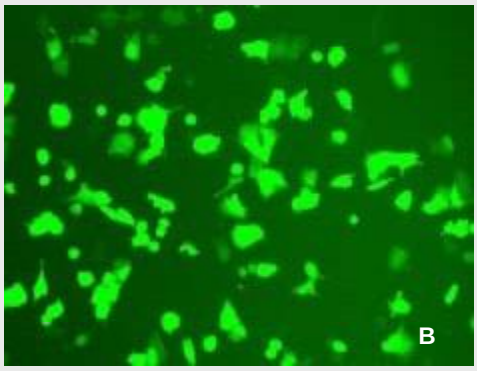
Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1600	10	4	5.6×10^6	85%	85%	10 µl
1400	20	2	5.6×10^6	80%	85%	10 µl
1400	20	2	5.6×10^7	80%	90%	100 µl

II. Cell information

Cell type / Description	T24 (Bladder epithelial, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Bladder Epithelial
Media	RPMI 1640 with 2mM L-glutamine + 10% FBS
Morphology	Epithelial
Double time	-
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

T98G, Brain





T98G cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

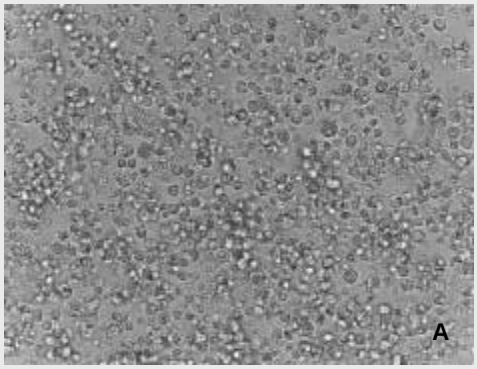
I. Microporation-parameter

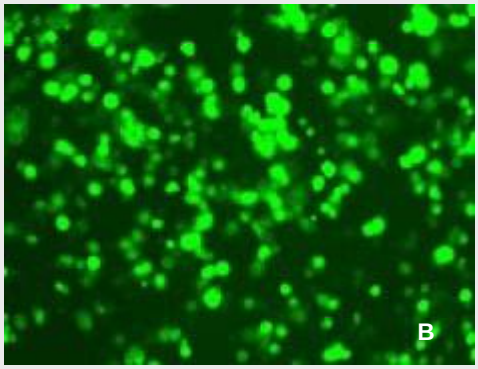
Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1200	30	1	5×10^6	75%	70%	10 µl
1050	40	1	5×10^6	73%	80%	10 µl

II. Cell information

Cell type / Description	T98G (Glioblastoma multiforme, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Brain
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Fibroblast
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

THP-1, Blood





THP-1 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

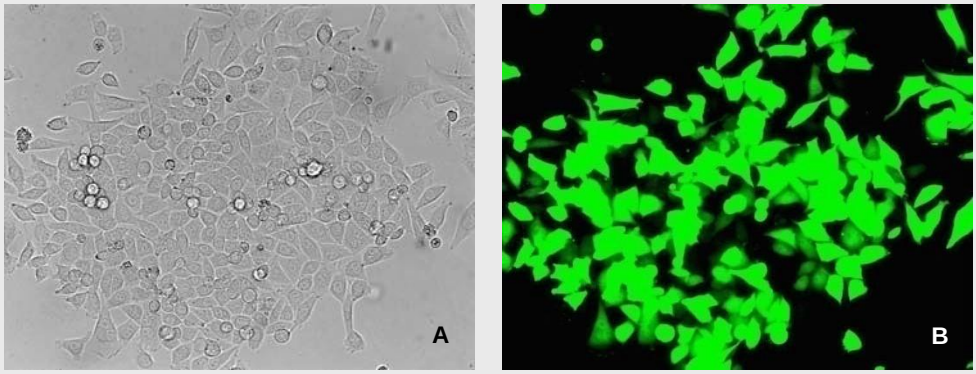
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1250	40	1	5×10^6	70%	45%	10 µl

II. Cell information

Cell type / Description	THP-1(Blood / Immune Cells / Human acute monocytic leukemia, Cell line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI1640, with 4500 mg / L D-glucose, with L-glutamine, with 10ml HEPES, 1mM sodium pyruvate, 1500mg / L-sodium bicarbonate+10% FBS
Morphology	Monocyte
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

TSU-Pr1, Bladder



TSU-Pr1 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

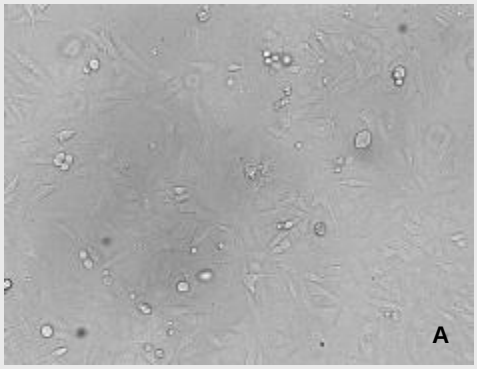
I. Microporation-parameter

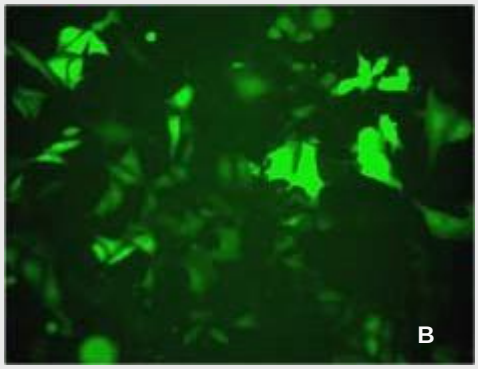
Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1350	20	2	7×10^6	85%	89%	10 µl
1050	30	2	7×10^6	83%	85%	10 µl
1350	20	2	5×10^7	86%	94%	100 µl

II. Cell information

Cell type / Description	TSU-Pr1(Bladder, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Bladder
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	Epithelial
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

U-2 OS, Bone





U-2 OS cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

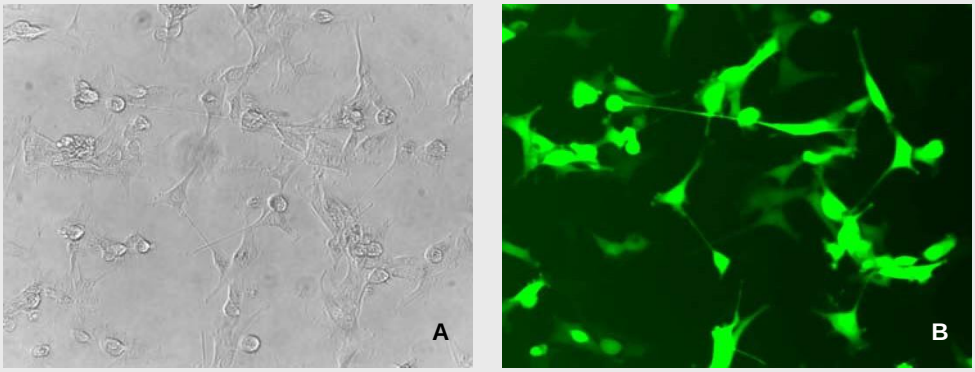
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1230	10	4	5×10^6	82%	95%	10 µl
1100	20	2	1×10^7	80%	95%	10 µl
1300	20	2	1×10^7			10 µl
1400	20	1	1×10^7			10 µl
1000	40	1	1×10^7			10 µl

II. Cell information

Cell type / Description	U-2 OS (Bone / Cartilage Cells / Osteosarcoma, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Bone
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

U-87 MG, Brain



U-87 MG cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

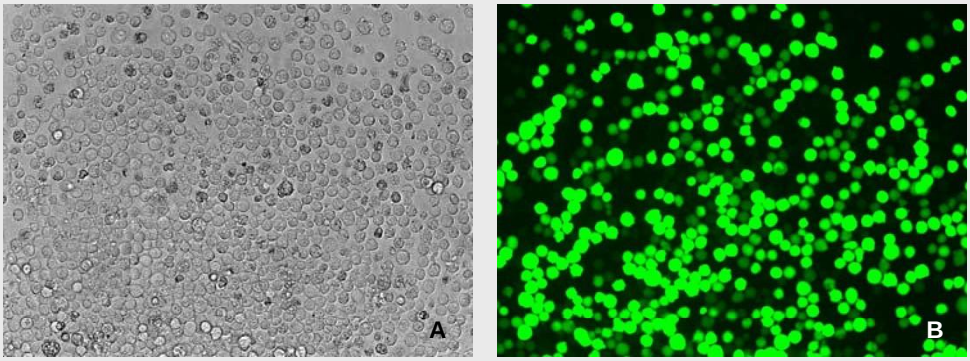
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1300	30	1	5×10^6	70%	70%	10 µl

II. Cell information

Cell type / Description	U-87-MG (Human Glioblastoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Brain
Media	
Morphology	Epithelial
Double time	Minimum essential medium (Eagle) with 2 mM L-glutamine, with Earle's BSS adjusted to contain 1.5 g / L sodium bicarbonate, with 0.1 mM non-essential amino acids, with 1.0 mM sodium pyruvate+10% FBS
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

U-937, Blood



U-937 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

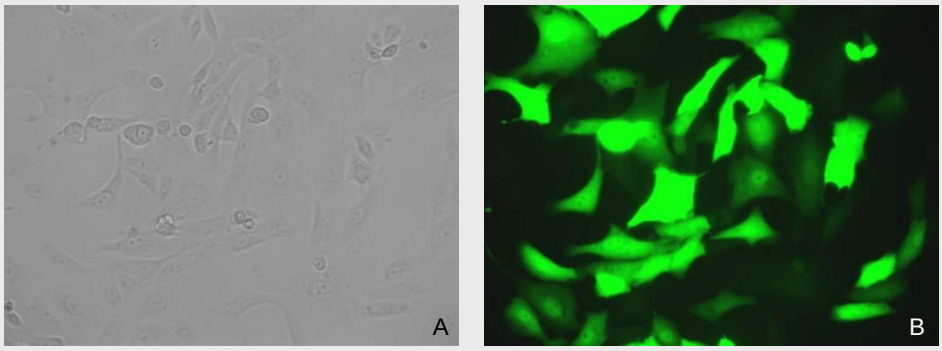
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1300	30	1	5×10^6	72%	60%	10 µl
1050	50	1	5×10^6	73%	65%	10 µl
1400	10	3	5×10^6	80%	70%	10 µl

II. Cell information

Cell type / Description	U-937 (Blood cells, Cell Line)
Characteristics / Species	Suspension / Human
Tissue Origin	Blood
Media	RPMI 1640, with L-glutamine + 10% FBS
Morphology	Monocyte
Double time	24 hr
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO^2), 5%

Vero, Kidney



Vero cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

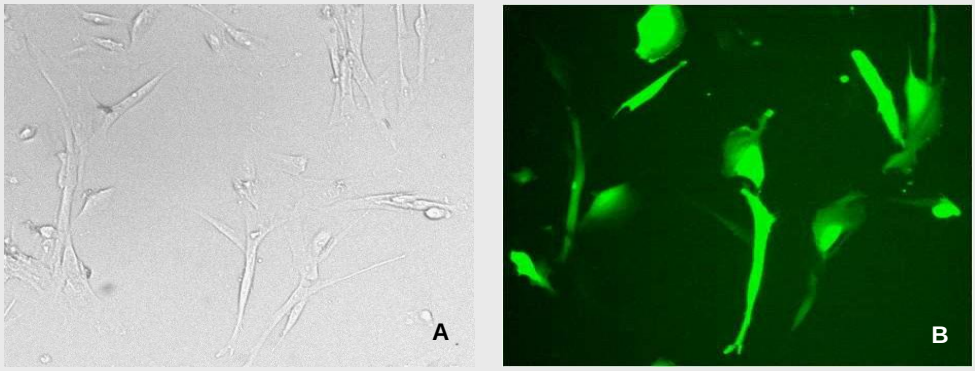
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1300	10	3	5.6×10^6	75%	80%	10 µl
1200	20	2	5.6×10^6	83%	68%	10 µl
1150	20	2	5.6×10^6	93%	59%	100 µl

II. Cell information

Cell type / Description	Vero (connective tissue cells, cell lines)
Characteristics / Species	Adherent / Monkey
Tissue Origin	Kidney
Media	RPMI1640 with L-glutamine (300mg / L), 25mM HEPES and 25mM NaHCO3, 90 %; heat inactivated fetal bovine serum (FBS), 10%
Morphology	Epithelial
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

WI-38, Lung



WI-38 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

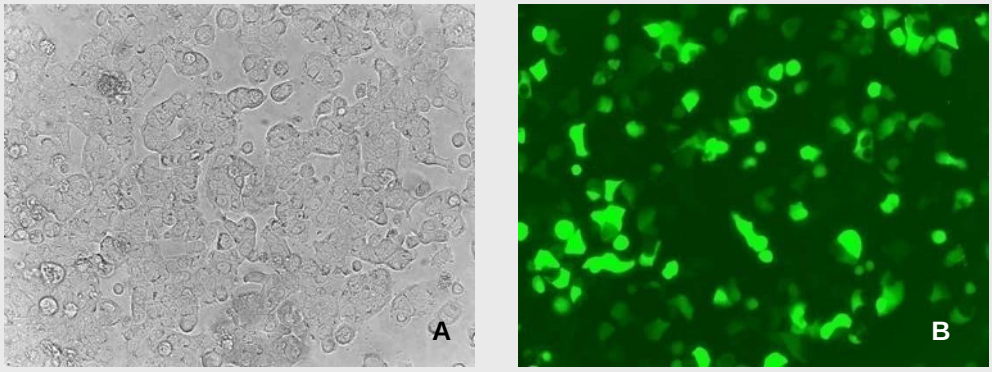
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1575	5	2	5×10^6	70%	70%	10 µl
1800	3	2	5×10^6	70%	70%	10 µl

II. Cell information

Cell type / Description	WI-38 (Lung cells, Primary cell)
Characteristics / Species	Adherent / Human
Tissue Origin	Lung
Media	Dulbecco's Modified Eagle's Medium (DMEM), with 4500 mg / L D-glucose, with L-glutamine, with 110 mg / L sodium pyruvate+10% FBS
Morphology	Fibroblast-like
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

WiDr, Colon



WiDr cells were transfected using ExTransfection™ and 0.5 ug of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

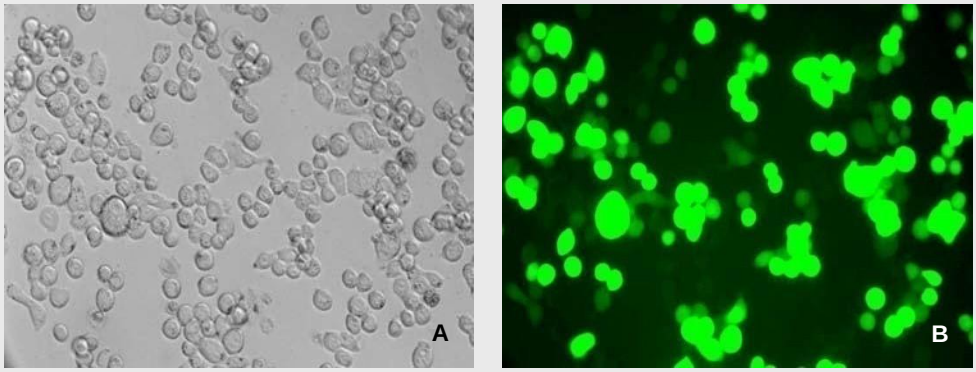
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1250	20	2	5×10^6	60%	70%	10 µl

II. Cell information

Cell type / Description	WiDr (Colorectal adenocarcinoma, Cell line)
Characteristics / Species	Adherent / Human
Tissue Origin	Colon
Media	Minimum essential medium (Eagle), with 2 mM L-glutamine, with Earle's BSS adjusted to contain 1.5 g / L sodium bicarbonate, with 0.1 mM non-essential amino acids, with 1.0 mM sodium pyruvate+10% FBS
Morphology	Epithelial
Double time	
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

WRO, Thyroid



WRO cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by light (**A**) and fluorescence microscopy (**B**).

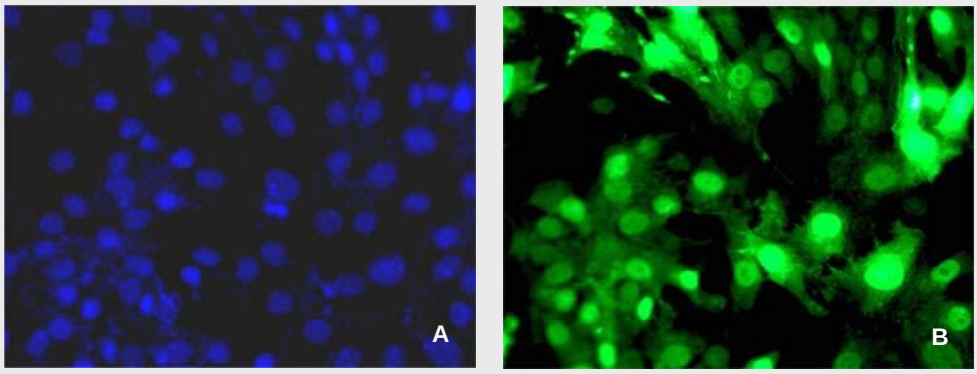
I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection Efficiency	Viability	Tip type
1650	20	1	7×10^6	83%	91%	10 µl
1300	20	2	7×10^6	72%	98%	10 µl
1100	30	2	7×10^6	72%	94%	10 µl
1700	20	1	5×10^7	75%	97%	100 µl

II. Cell information

Cell type / Desription	WRO (Thyroid, Cell Line)
Characteristics / Species	Adherent / Human
Tissue Origin	Thyroid
Media	RPMI-1640, with L-glutamine +10% FBS
Morphology	-
Double time	-
Subculturing	Medium renewal: Every 2 to 3 days
Culture condition	Temperature: 37°C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%

Y-1, Adrenal gland



Y-1 cells were transfected using ExTransfection™ and 0.5 µg of a plasmid encoding the EGFP. 24 hours post Microporation, the cells were analyzed by fluorescence microscopy **(A)** DAPI (**B**) GFP.

I. Microporation-parameter

Pulse Voltage (V)	Pulse Width (ms)	Pulse Number	Cell Density (cells / ml)	Transfection efficiency	Viability	Tip type
1400	30	2	5×10^6	77%	70%	10 µl

II. Cell information

Cell type / Description	Y-1 (Immortalized adrenocortical / Steroidogenic cortical cells, Cell Line)
Characteristics / Species	Adherent / Mouse
Tissue Origin	Adrenal gland
Media	Ham's F12 medium, with 2 mM L-glutamine, with 1500 mg / l sodium biocarbonate+15%HS+ 2.5% FBS
Morphology	Epithelial
Double time	
Subculturing	A subcultivation Ratio of 1:4 is recommended
Culture condition	Temperature: 37˚C Atmosphere: air, 95%; carbon dioxide (CO_2), 5%