

NEPA21 Comparison with

- Amaxa-Nucleofector
- Neon and Lipofectamine 2000 (Invitrogen)

Disposable Kits / Special Buffers

**NEPA21
(Nepa Gene)**



**Nucleofector
(Lonza)**



**Neon
(Invitrogen)**



Cuvettes Only
No Special Buffers



Cuvettes
Special Buffers



Tips
Special Buffers

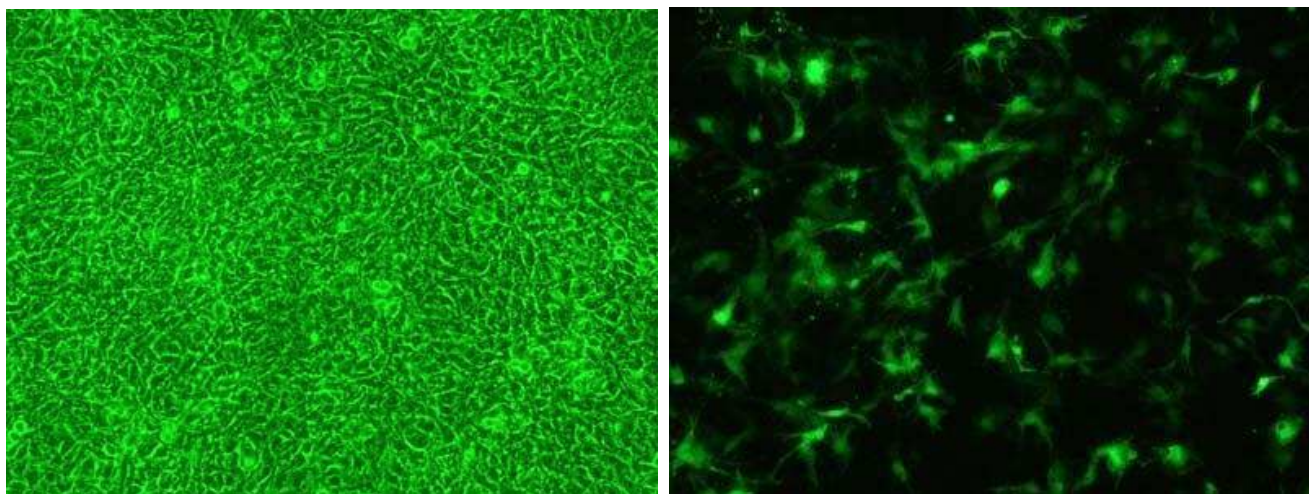


Cost per Sample:
JPY 210

Cost per Sample:
JPY 1,920-2,750

Cost per Sample:
JPY 1,719-2,200

MC3T3-E1 Mouse Osteoblastic Cells



NEPA21
 (Nepa Gene) **Viability: 85%**

Transfection Efficiency: 75%

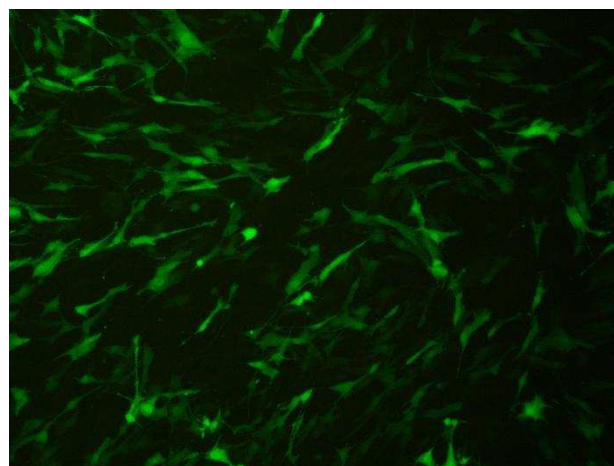
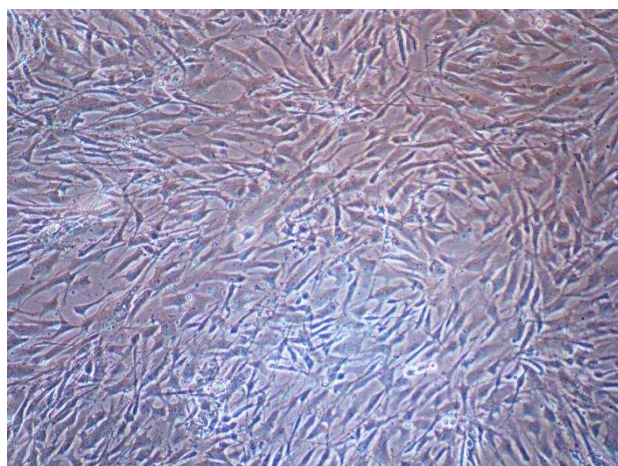


Nucleofector
 (Lonza: Amaxa) **Viability: 95%**

Transfection Efficiency: 10%

The University of Tokushima Graduate School, Japan

Primary Mesenchymal Stem Cells



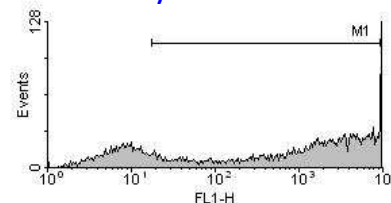
NEPA21
 (Nepa Gene) **Viability: 78%**

Transfection Efficiency: 75%



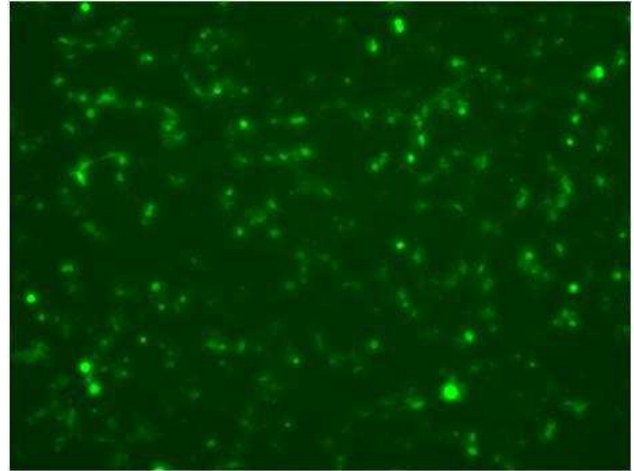
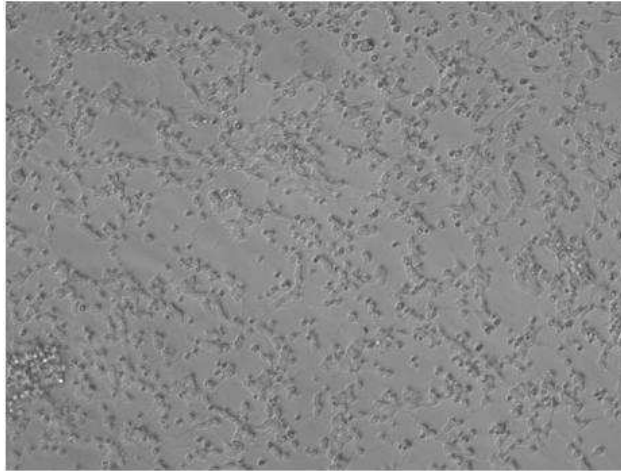
Nucleofector
 (Lonza: Amaxa) **Viability: 20%**

Transfection Efficiency: 20%



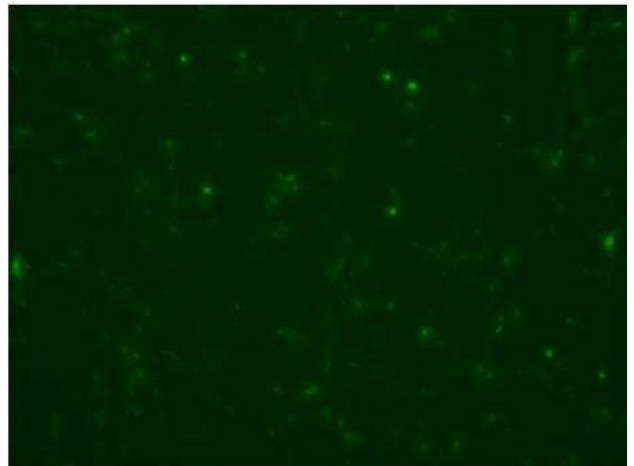
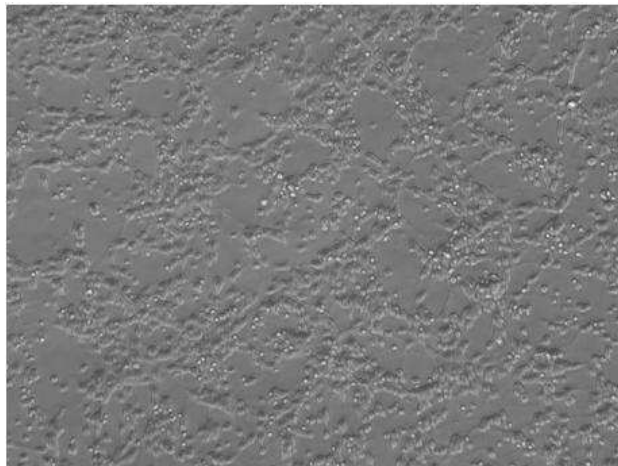
A Biotechnology Company, Korea

Primary Rat Cerebellar Granule Neurons (CGN)



NEPA21
(Nepa Gene) **Viability: 70%**

Transfection Efficiency: 80%



Nucleofector
(Lonza: Amaxa) **Viability: 65%**

Transfection Efficiency: 45%

Graduate School of Biomedical Sciences, Hiroshima University, Japan

Human Astrocytoma Cells (1321N1)



NEPA21
(Nepa Gene) **Viability: 85%**

Transfection Efficiency: 75%



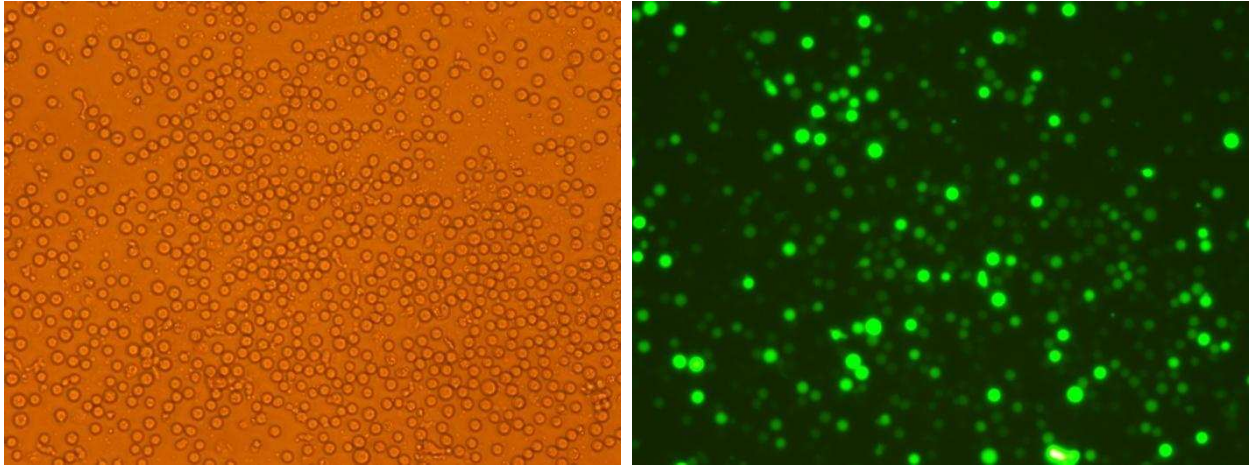
Nucleofector
(Lonza: Amaxa) **Viability: 10%**

Transfection Efficiency: --

Takasaki University of Health and Welfare, Japan

Primary Human T Cells

The cells were cultured and stimulated with CD3 CD28 antibody for 66 hours before Electroporation



NEPA21
(Nepa Gene)

Viability: 58%

Transfection Efficiency: 90%



Nucleofector
(Lonza: Amaxa)

Viability: 20%

Transfection Efficiency: 60%

Pasteur of Shanghai, Chinese Academy of Sciences, China

RAW264.7 Mouse Macrophage-like Cells

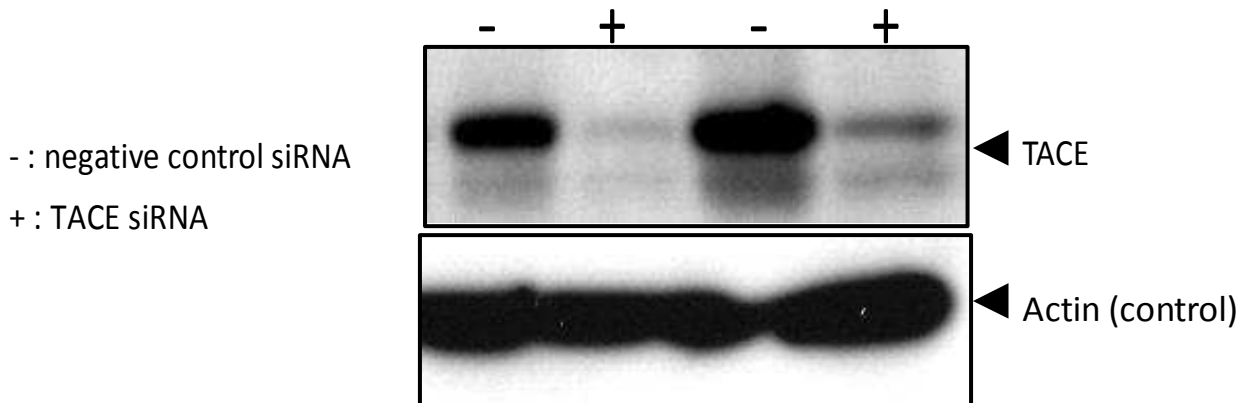
siRNA transfection



NEPA21
(Nepa Gene)



Nucleofector
(Lonza: amaxa)



Keio University School of Medicine, Japan

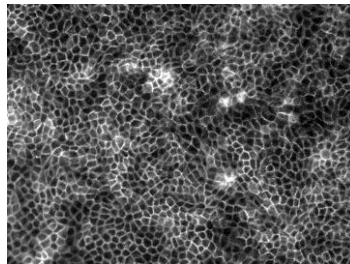
Madin-Darby Canine Kidney Cells (MDCK)

shRNA plasmid transfection

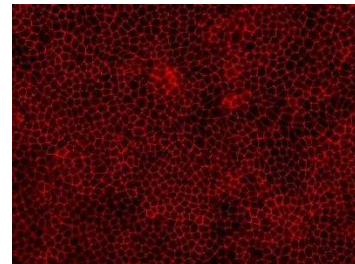


***After EP, the cells were directly seeded on Transwells.**

No Electroporation (EP)



PAR-1b staining

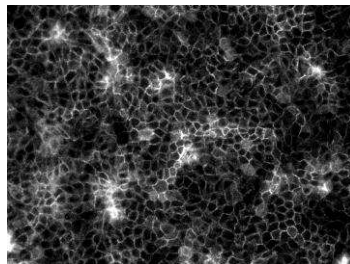


GFP / ZO1

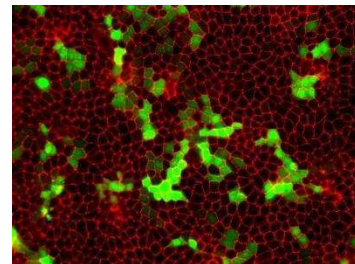
Nonsilencing control (transfected cells were detected with GFP signals)



The cells survived enough for being cultured on Transwells.



PAR-1b staining

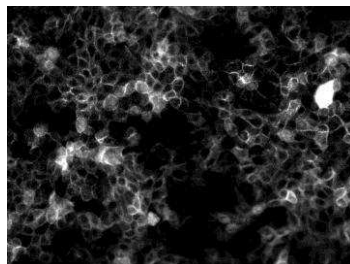


GFP / ZO1

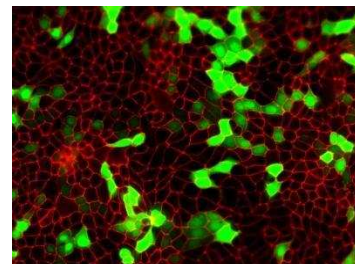
PAR-1b RNAi (transfected cells were detected with GFP signals)



The cells survived enough for being cultured on Transwells.



PAR-1b staining



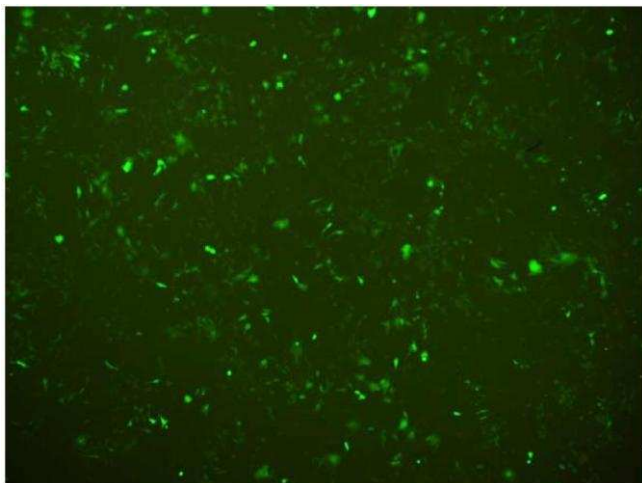
GFP / ZO1

“Only NEPA21 makes it possible to culture MDCK cells on Transwells after EP. The amaxa device can not allow such experiments due to severe damage to the cells.”



Dr. Atsushi Suzuki, Yokohama City University Graduate School of Medical Science, Japan

Primary Mouse Embryonic Fibroblasts (MEF)



NEPA21
(Nepa Gene)

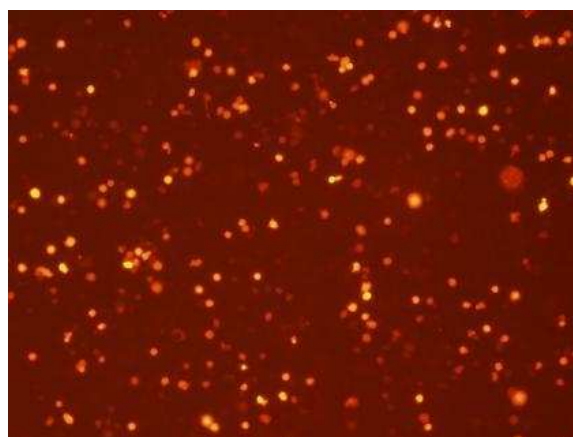
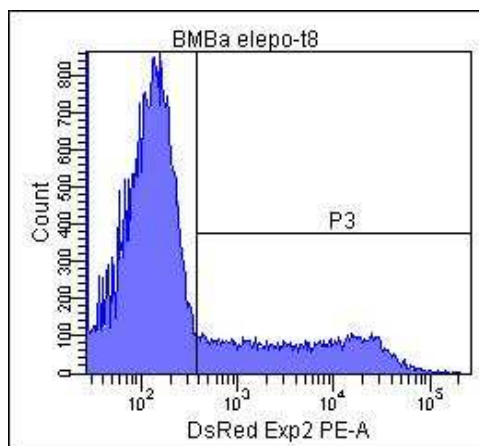


Neon
(Invitrogen)

Viability: 70% Transfection Efficiency: 80%

Shanghai Jiao Tong University School of Medicine, China

BMBa Mouse Bone Marrow-derived Basophils



NEPA21
(Nepa Gene)

Viability: 43%

Transfection Efficiency: 26%



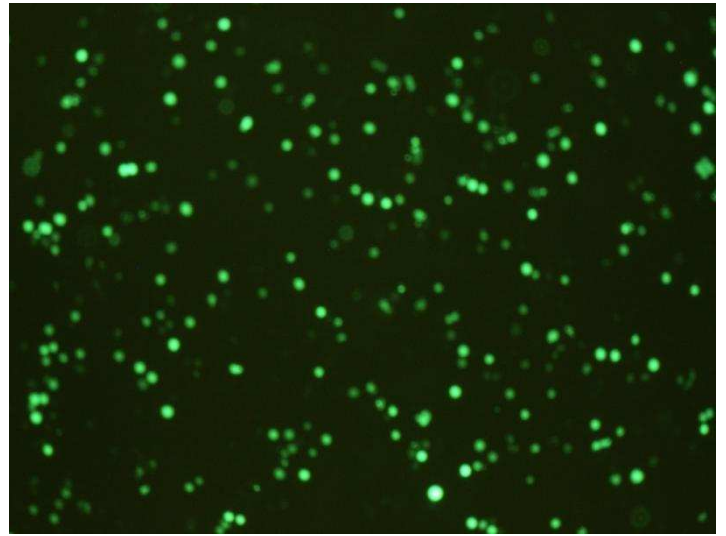
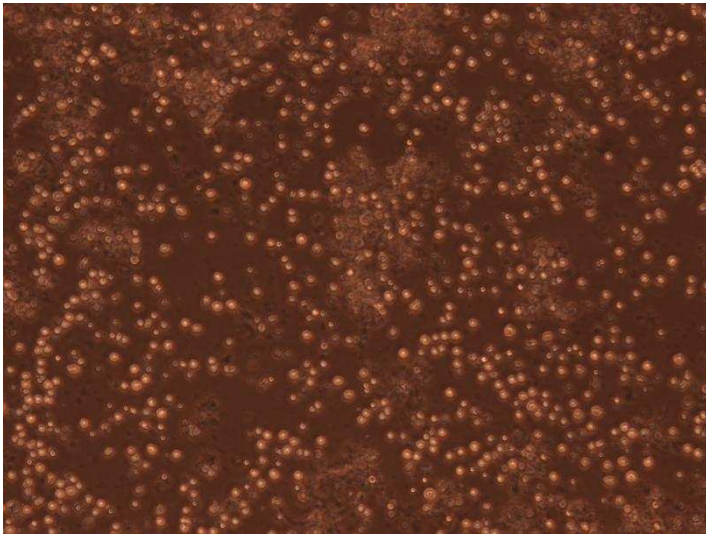
Neon
(Invitrogen)

Viability: 18%

Transfection Efficiency: 23%

Tokyo Medical and Dental University, Japan

KG-1 Human Acute Myeloid Leukemia cells



NEPA21
(Nepa Gene)

Viability: 60%

Transfection Efficiency: 65%

Lipofectamine 2000 (Invitrogen) Viability:

Transfection Efficiency: 0%

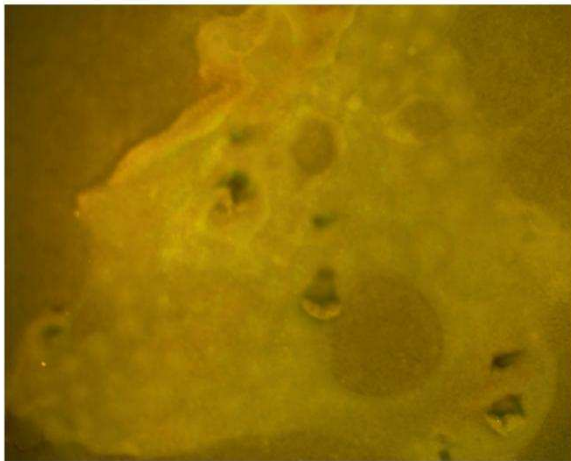
Hyogo College of Medicine, Japan

Transfection of pCMV-EGFP into
Chicken embryonic skin explants:
specifically the epidermal cells in the top layer of the skin



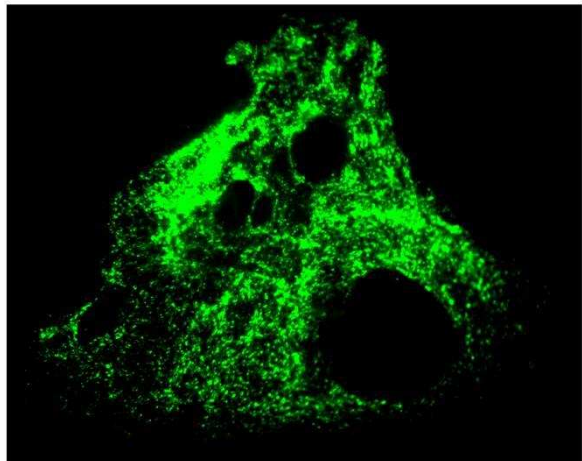
Electrode: CUY520P5

Whole skin sample (brightfield)



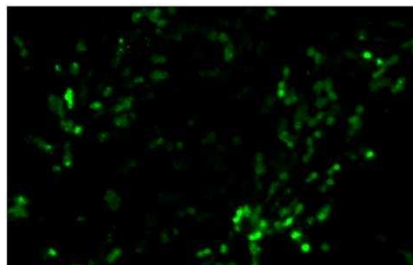
Viability: 100%

GFP



Transfection Efficiency: 80%

Existing system



NEPA21

