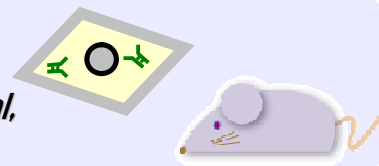


# GenomONE series (HVJ Envelope transfection and cell fusion kits)

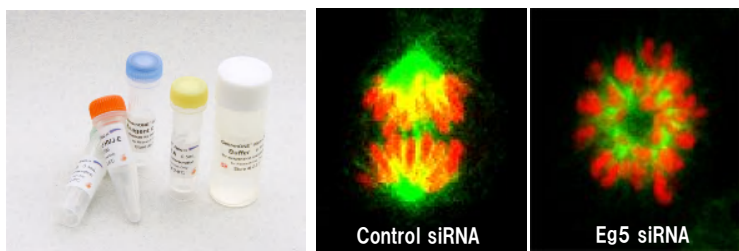
A biotechnology research tool making use of the membrane-fusing potential of HVJ Envelope (HVJ-E : inactivated Sendai virus)

## Transfection reagent

Direct introduction into cells making use of membrane-fusing potential, without mediation by endocytosis



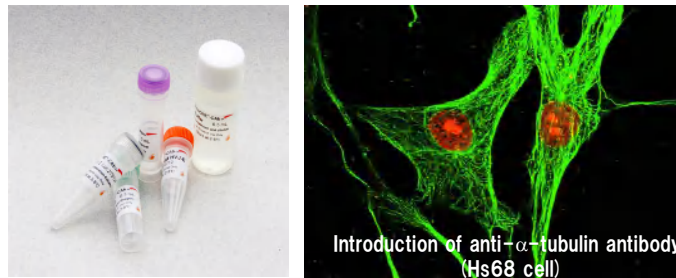
### GenomONE-Neo EX



Control siRNA

Eg5 siRNA

### GenomONE-CAb EX



Introduction of anti- $\alpha$ -tubulin antibody (Hs68 cell)

Following antibody introduction, the cell is fixed and stained with AlexaFluor 488-labeled anti-mouse IgG F(ab')<sub>2</sub> antibody (observed under a confocal laser scanning microscope)

#### HVJ-E Transfection Kit

(for introduction of DNA/RNA and protein)

- Applicable to *in vitro* and *in vivo* transfection experiments
- Transfection mediated by membrane fusion completely different from lipid-based reagents
- Unlikely to undergo lysosomal degradation, enabling high efficiency of transfection
- Performance demonstrated in more than 140 published papers

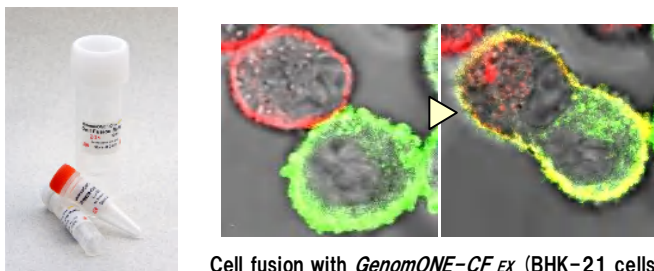
HVJ-E: Hemagglutinating virus of Japan (Sendai virus) envelope

#### HVJ-E Antibody Delivery Kit

- Optimal for functional analysis of living cells through antibody introduction
- Higher efficiency of IgG antibody incorporation into HVJ-E than **GenomONE-Neo EX**
- Can be used for analysis of disturbance of function and localization of intracellular proteins
- Can be used for screening of antibodies to intracellular antigens and drug creation research

## Cell fusion reagent

### GenomONE-CF EX

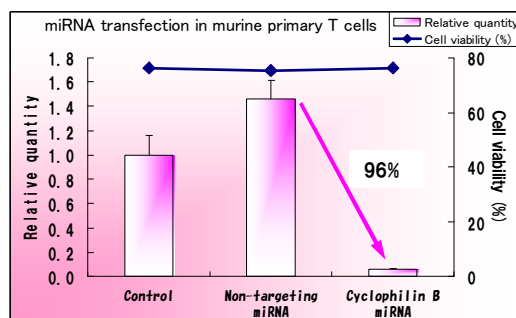


Cell fusion with *GenomONE-CF EX* (BHK-21 cells)

#### HVJ-E Cell Fusion Kit

- For preparation of hybridomas (monoclonal antibodies)
- For research on development, differentiation, and breeding (transplantation and replacement of nuclei)
- Research on regenerative medicine and cytotherapy
- Research on anti-cancer vaccination and cancer immunology

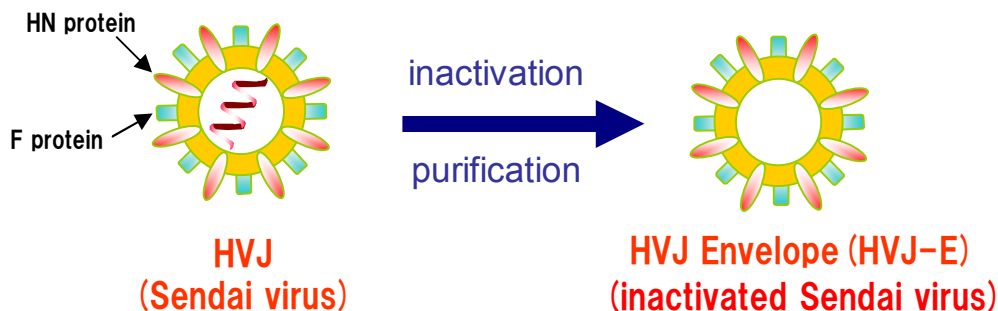
### New! GenomONE-Si



#### HVJ-E siRNA/miRNA transfection Kit

- Ease-of-use, only 5 steps/complete within 5-10 minutes
- Applicable to hard-to-transfect immune cells (e.g. primary T cells)
- Suitable for high-throughput applications
- Safe for use & low cytotoxicity

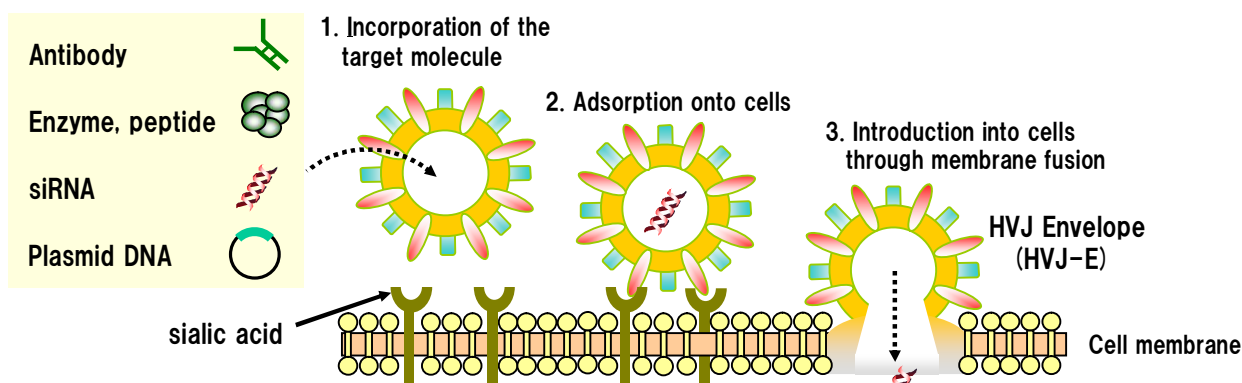
## ● What is HVJ-E (inactivated Sendai virus) ?



Hemagglutinating virus of Japan (HVJ) Envelope (HVJ-E) is a non-proliferative and non-infectious vesicle about 300 nm in diameter on average purified after complete inactivation of Sendai virus genomic RNA. Since the F protein distributed on the HVJ-E envelope has high membrane-fusing potential comparable to that of live virus, it is possible to use HVJ-E itself as a cell-fusing agent or to introduce genes, proteins, anti-cancer agents, *etc.* in HVJ-E-incorporated form into cells for analysis of their functions.

HVJ (Hemagglutinating virus of Japan) is also called Sendai virus (SeV) or Mouse Parainfluenza virus type 1.

## ● Introduction into cells making use of the membrane-fusing potential of HVJ-E



### References (Review articles)

Kaneda Y. *et al.* : Hemagglutinating virus of Japan (HVJ) envelope vector as a versatile gene delivery system. *Molecular Therapy*, 6, 219-226 (2002).

Kaneda Y. : New vector innovation for drug delivery: development of fusigenic non-viral particles. *Curr. Drug Targets*, 4 (8), 599-602 (2003).

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Zhang Q. *et al.* : HVJ envelope vector, a versatile delivery system: its development, application and perspectives. *Biochem. Biophys. Res. Commun.*, 373, 345-349 (2008).

HVJ-E: Hemagglutinating virus of Japan (Sendai virus) envelope