**Transfection reagent**
Direct introduction into cells making use of the HVJ Envelope’s membrane-fusing potential, without mediation by endocytosis

**GenomONE™-Neo EX**

HVJ-E Transfection Kit
for introduction of DNA, siRNA 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 200 published papers

Inhibition of spindle orientation through Eg5 knock down (HT1080 cell:red:DNA, green: α-tubulin).

**GenomONE™-CAb EX**

HVJ-E Antibody Delivery Kit
for introduction of IgG antibody

- 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

Following antibody introduction, the cell is fixed and stained with Alexa Fluor® 488-labeled anti-mouse IgG Fab’2 antibody (observed under a confocal laser scanning microscope).

**Cell fusion reagent**
A new reagent replacing the conventional PEG
Lower cytotoxicity and easier manipulation

**GenomONE™-CF EX**

HVJ-E Cell Fusion Kit

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

Cell fusion with GenomONE-CF EX (HVJ-E Cell Fusion Kit) (time course of 67 minutes).
DHK-21 cells labeled with red and green fluorescent dyes incubated at 37°C in the presence of HVJ-E and observed under a confocal laser scanning microscope.

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

Alexa Fluor® is a registered trademark of Life Technologies Corporation.
**What is HVJ-E (inactivated Sendai virus)?**

Hemagglutinating virus of Japan (HVJ) Envelope (HVJ-E) is a non-proliferative and non-infectious vesicle approximately 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 as a cell-fusing agent or a vector to introduce genes, proteins and anti-cancer agents in HVJ-E-incorporated form into cells to analyse their function.

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**

1. Incorporation of the target molecule
2. Binding between HN proteins and sialic acid receptors
3. Introduction into cells through membrane fusion

**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).