

GenomONE™ series

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

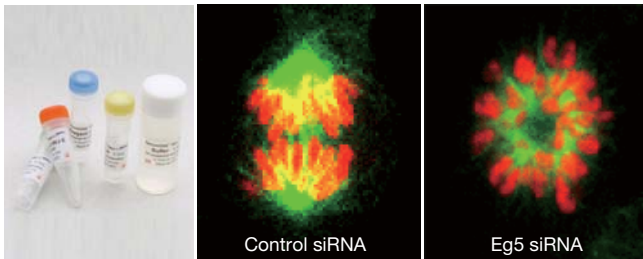
HVJ Envelope transfection and cell fusion kits

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

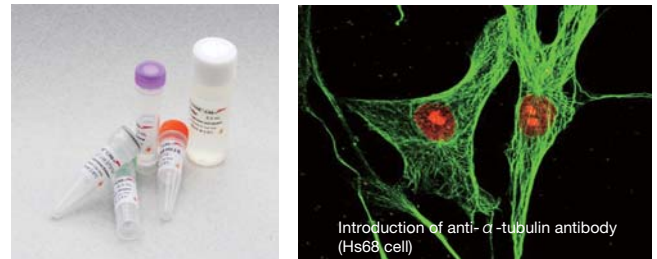


Inhibition of spindle orientation through Eg5 knock down (HT1080 cell/red: DNA, green: α -tubulin).

- 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

GenomONE™-CAB EX

HVJ-E Antibody Delivery Kit for introduction of IgG antibody



Following antibody introduction, the cell is fixed and stained with Alexa Fluor® 488-labeled anti-mouse IgG F(ab')₂ antibody (observed under a confocal laser scanning microscope).
Alexa Fluor® is a registered trademark of Thermo Fisher Scientific Inc.

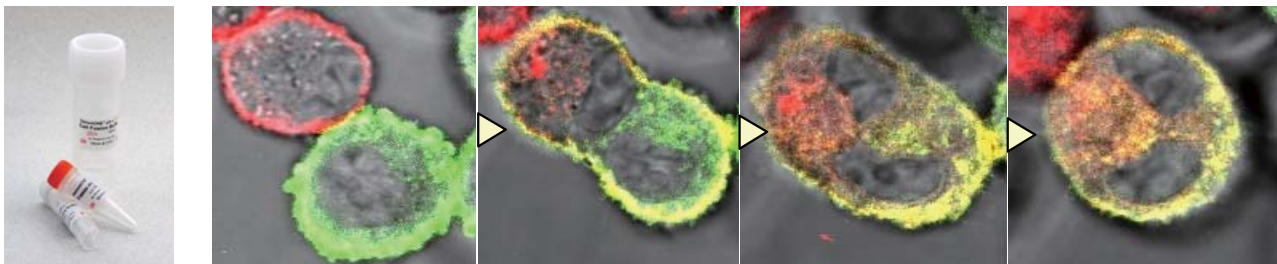
- Optimal for functional analysis of living cells through antibody introduction
- Higher efficiency of IgG antibody incorporation into HVJ-E than **GenomONE™-Neo EX**
- Can be used for analysis of disturbance of function and localization of intracellular proteins
- Can be used for screening of antibodies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

Cell fusion reagent

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

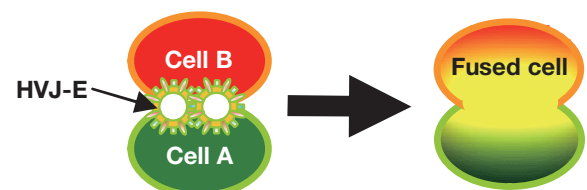
GenomONE™-CF EX

HVJ-E Cell Fusion Kit



Cell fusion with GenomONE-CF EX (HVJ-E Cell Fusion Kit) (time course of 67 minutes)
BHK-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.

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



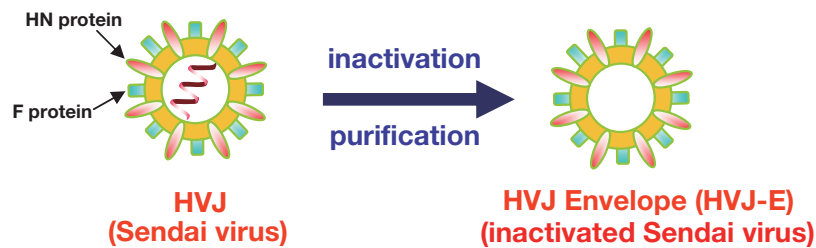
HVJ-E: Hemagglutinating virus of Japan (Sendai virus) envelope



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HVJ Envelope transfection and cell fusion kits

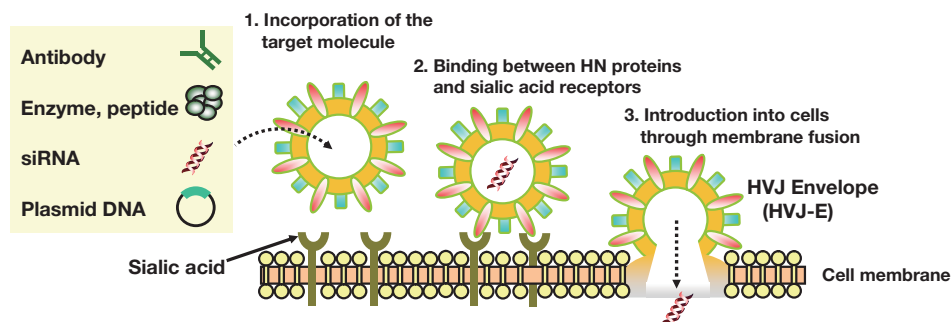
What is HVJ-E (inactivated Sendai virus)?



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



Description	Cat. No.	Quantity	Storage
GenomONE™-Neo EX HVJ-E 1 vial Transfection Reagents	ISK-GN-001-EX	1 set	4°C
GenomONE™-Neo EX HVJ-E 4 vials Transfection Reagents	ISK-GN-004-EX	1 set	
GenomONE™-CAb EX 1 vial Antibody Delivery Reagents	ISK-AB-001-EX	1 set	
GenomONE™-CAb EX 4 vials Antibody Delivery Reagents	ISK-AB-004-EX	1 set	
GenomONE™-CF EX SeV-E (HVJ-E) 1 vial Cell Fusion Reagents	ISK-CF-001-EX	1 set (for 10 hybridoma fusion experiments)	

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).
 Kaneda Y., Applications of Hemagglutinating Virus of Japan in therapeutic delivery systems. *Expert Opin. Drug Deliv.*, 5 (2), 221-233 (2008).
 Zhang Q. *et al.*, HVJ envelope vector, a versatile delivery system: its development, application and perspectives. *Biochem. Biophys. Res. Commun.*, 373, 345-349 (2008).
 Lund, P. E. *et al.*, Pseudovirions as Vehicles for the Delivery of siRNA. *Pharm. Res.*, 27 (3), 400-420 (2010).

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