



# HOKKAIDO UNIVERSITY

Title	CHARACTERIZATION OF Bam HI-H GENOME AND cDNA OF MAREK'S DISEASE VIRUS (MDV) PREDICTED TO ENCODE THE B ANTIGEN
Author(s)	INAGAKI, Naohito
Citation	Japanese Journal of Veterinary Research, 40(1), 32-32
Issue Date	1992-05-29
Doc URL	<a href="https://hdl.handle.net/2115/2365">https://hdl.handle.net/2115/2365</a>
Type	departmental bulletin paper
File Information	KJ00002377557.pdf



CHARACTERIZATION OF *Bam* HI-H GENOME AND  
cDNA OF MAREK'S DISEASE VIRUS (MDV)  
PREDICTED TO ENCODE THE B ANTIGEN

Naohito INAGAKI

*Department of Radiation Biology,  
Faculty of Veterinary Medicine,  
Hokkaido University, Sapporo 060, Japan*

To identify the gene region which encodes the Marek's disease virus B antigen, nucleotide sequencing of the *Bam* HI-H fragment of MDV (strain GA) DNA which spans IR<sub>L</sub> to U<sub>L</sub> was carried out and a predicted polypeptide was characterized. Furthermore cDNA was constructed from mRNA of strain CVI-988 infected CEF and screened by plaque hybridization using the 0.9 kbp *Eco* RI-*Eco* RI subfragment of *Bam* HI-H as a probe. The nucleotide sequence of cDNA was determined.

Twenty-three ORFs that contain the *Eco* RI-*Eco* RI subfragment and from IR<sub>L</sub> to U<sub>L</sub> were detected. The longest ORF was 870b. By cloning of cDNA, a 1.8kbp clone spanning the IR<sub>L</sub> to u<sub>L</sub> and containing the *Eco* RI-*Eco* RI subfragment was detected. This cDNA clone was transcribed from IR<sub>L</sub> to U<sub>L</sub> and contained the 870b ORF. Its nucleotide sequence indicates there is no splicing site in either the upper stream or the lower stream of the 870b ORF, and the nucleotide sequence is the same as that of the *Bam* HI-H genome. The predicted polypeptide from the 870b ORF is 31kD and has a strong hydrophobic site in the C terminus but has only one potential N-glycosylation site. The mean index of hydropathy from the Kyte and Doolittle hydro-table is -0.49.

These results suggest that the 1.8kb mRNA which contains the *Eco* RI-*Eco* RI subfragment of *Bam* HI-H and transcribed from IR<sub>L</sub> to U<sub>L</sub> may not encode the B antigen.