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Identification of Human Endogenous Retrovirus HC2-like Elements that is Expressed in Various Tissues of *Macaca fuscata* (Japanese Monkey)

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Human endogenous retrovirus (HERV) HC2 is an incomplete provirus with the entire *gag* and *pol* genes and a 3'LTR present. It was found to be more closely related to the HERV S71 than to other murine leukaemia virus (MuLV)-related retroviruses such as gibbon ape leukaemia virus (GaLV), feline leukaemia virus (FeLV), baboon endogenous virus (BaEV) and simian sarcoma virus/simian-associated sarcoma virus (SSV/SSAV). We identified thirty-two HC2-like elements from mRNA of various tissues (seminal vesicle, testis, prostate, kidney, cellebrillium, thymus, placenta, intestine, stomach, and ovary) from the Japanese monkey using RT-PCR approach. They were expressed in all tissues examined in Japanese monkey. Those sequences are closely related to HC2-pol elements from human chromosomes in our previous data with a high degree of sequence homology in a neighbor-joining phylogenetic tree. Sequence analysis also indicated that same sequences are expressed in different tissues of the monkey. Translation of the HC2-pol elements showed no frameshift and termination codon by deletion/insertion or point mutation in clones JM-HC21-5 from seminal vesicle and JM-HC25-2 from cellebrillium. The ratio of synonymous ad non-synonymous substitutions

indicated that negative selective pressure is acting on JM-HC21-5 and JM-HC25-2 sequences. The data could be of great use for further functional study with the HERV in monkey tissues.