

Nawee Mounghaek 2008: Using PCR Technique for Detection of Endogenous Retroviruses in Chickens. Master of Science (Agricultural Biotechnology), Major Field: Agricultural Biotechnology, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Voravit Siripholvat, D.Agr. 67 pages.

Endogenous retroviruses are viruses, which are capable to transfer the genetic material. These viruses can be found in mammal and other living organism. This study aimed to detect the manifested endogenous retroviruses in several kinds of chicken breeds raise in Thailand. Four breeds of native, tri-yellow, broiler and commercial layer chickens were used to detect the endogenous retroviruses in chickens. Blood from 30 chickens of each breed was drawn and individually precipitated for DNA and further process with PCR protocol to detect DNA pattern with the 7 loci of specific primer ALVE-1, ALVE-12, ALVE-15, ALVE-21, ALVE-B3 ALVE-9 and ALVE-B4. It was found that the primer ALVE-1, ALVE-12, ALVE-15, ALVE-21 and ALVE-B3 gave only 1 band of DNA size 505, 320, 180, 510 and 458 bp, respectively in every individuals of all breeds. However, the primer of ALVE-9 and ALVE-B4 illustrated no band pattern. In addition, Single Nucleotide Polymorphism (SNPs) were identified within ALVE-B3 (458 bp) fragment in 4 breeds by using single strand conformation polymorphism (SSCP). The SSCP patterns were analyzed on the 10% nondenaturing polyacrylamide gel electrophoresis (PAGE). The results showed that the SSCP pattern did not different in 4 breeds. But, nucleotide sequences of ALVE-B3 gene were different between breeds, because, there were point mutations in this gene with transition and transversion.

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