F105 The characterization and structure of ε-globin gene Perissodactyla

Gi OK Kim, Moon You Oh, Se Jae Kim, Seng Soo Lee [1], and Kyu Il Kim [1]
Department of Biology, [1)] Department of Animal Science of Cheju of Cheju National University

To synthesize the ε-globin gene from Perissodactyla PCR was performedd by using gemonic DNA as template and synthesized primers. The PCR product was 1.475 Kb in length. The amplified ε-globin genes were cloned by using A-T cloning metgod, and their nucleotides were determined by using he Sanger' s method. The structure of ε-globin gene amplified by PCR from Perissodactla showed that it contained consensus CCAAT at position -85 site a Hogness-Goldberg box (ATA) at position -30 site, ane mRNA ribosomal binding seQuence CTTCTC at position +8 site in the 5' flanking-region. The Amino acid sequence encoded by exon 1 and 2 (105 amino acids) of ε-globin gene was highly homologous to human ' s (84%), goat ' s (89%), respectively. The insert sequence in IVS 2 of ε-globin gene was not found. The ε-globin gene, as is typical of other β-like globin genes. contains three exons and two introns. The second intron (865 bp) of the ε-globin show different length, as human and goat, is 960 bp and 1039 bp in length. This difference is entirely due to a difference in the size of insertion element.

F106 *P* elements Distributed in Drosophilid Species In Korea

Gyung Hye Yang*, Won Taek Kim
Department of Biology, College of Natural Sciences, Cheju National University

The genus *Drosophila* were isolated from Korean national population (Cheju-Do) and examined for *P* element in the genome by using PCR with inverted repeat primers. five of the *P* elements in PCR product were found to be 2.9 kb, 1.3 kb, 1.15 kb, 0.55 kb and 0.45 kb elements. Southern blot analysis on the genus *Drosophila* were also performed with *Ava*II restriction enzyme. The results of Southern blot analysis showed that *P*-homologous sequences are essentially confined to the subgenus *Sophophora*. The strongest *P* hybridization occurs in species from the closely related *melanogaster* and *obscura* groups. The *D. melanogaster P* element is most similar to the elements from the *obscura* group.