



D5 Highly Informative Y-Chromosomal Haplotypes of Four Y-Specific STR Loci, DYS385, DYS446, DYS449, and DYS464

Kyoung-Jin Shin, DDS, PhD, Yonsei University, Department of Forensic Medicine, College of Medicine, Yonsei University, Biometrics Engineering Research Center, Seoul, 120-752, Korea; Myung Jin Park, MS, Yonsei University, Department of Forensic Medicine, College of Medicine, Seoul, 120-752, Korea; Ukhee Chung, BS, Yonsei University, Department of Forensic Medicine, College of Medicine, Yonsei University, Biometrics Engineering Research Center, Seoul, 120-752, Korea; Ji-Eun Yoo, MS, and Hwan Young Lee, PhD, Yonsei University, Department of Forensic Medicine, College of Medicine, Seoul, 120-752, Korea*

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Y-chromosome-specific STR typing has become very useful in evolutionary studies and forensic casework, namely in deficiency paternity testing and in rape cases involving one or more semen donors. So far, numerous Y-STRs have been discovered and some have been used for forensic purposes and population studies to evaluate diversity of the haplotypes. However, forensic researchers have been looking for small and efficient subsets of STRs that might distinguish more individuals. Therefore, the combination or addition of new Y-STR markers with extremely high gene diversity has been attempted in many groups. More recently, new highly informative Y-specific STRs (DYS446, DYS449, and DYS464) have been identified and expected to be useful for the establishment of small but efficient subset of STRs. In this work, we applied single multiplex PCR system to analyze 4 Y-STRs (DYS385, DYS446, DYS449, and DYS464) in 300 Koreans. We calculated the haplotype and allele frequencies, and the usefulness of these four highly informative Y-STRs was discussed by comparing its haplotype diversity with that of minimal haplotype.

Four Highly Informative Y-STRs, Haplotype Diversity, Minimal Haplotype