CHIMERSIM OF SOMATIC CELLS IN AN INDIVIDUAL: STR GENOTYPING ON FORENSIC CASES

Sang-ok Moon, Kyoung Don Kwak, Sang Cheul Shin, Won Hae Lee, Dong Ho Choi,
Myun Soo Han
Forensic DNA Center, National Forensic Service, Seoul 158-707

We report a STR genotype with different variants at a single STR locus (FGA) displaying chimerism of somatic cells in single individual. Genomic DNAs extracted from evidence samples (blood stain, pubic hairs and victim`s blood) were analyzed with the multiplex AmpFlSTR Identifiler™ and the multiplex AmpF/STR Y-filer™kit (AppliedBiosystems, FosterCity, CA). The victim`s blood sample and all other samples (evidence sample) showed an identical in all 15 STR loci analyzed, whereas one hair root (evidence sample) was discovered identical in 14 autosomal STR loci excluding FGA locus. FGA locus of hair root has two (heterozygote) peaks (24, 25), whereas all other samples have one (homozygote) peaks (25). Also We obtained same result in analyzed locus with not PowerPlex 16 System (Promega, USA) but Y-STR analysis. We suggested that the possibility of somatic mutation in single individual. This mutation has to be considered for the storage of STR profiles in DNA database.