



Fig. S4 Intra-locus imbalance at D5S818. During size-based STR analysis intra-locus imbalance was observed at D5S818 due to sequence variation located in close proximity of the 3' end of the PowerPlex 16 kit forward primer. The black arrow denotes the sequence string containing the A>G transition. This particular SNP (rs182073376) affects the PCR by decreasing thermal stability of the primer-template complex and reducing the PCR performance. **a)** CE electropherogram of D5S818 after amplification with the PowerPlex 16 kit, **b)** MPS-based genotype result, **c)** aligned sequences showing different allele calls at D5S818.