

# SNP

**Single Nucleotide Polymorphisms** or SNPs (pronounced "snips") are variations in a DNA sequence that occur when a single nucleotide in the sequence is different from the norm in at least one percent of the population. When SNPs occur inside a gene, they create different variants, or alleles, of that gene.

Unlike repeated portions of DNA like STRs and VNTRs, in the case of SNPs it is the sequence itself, not its length, that is useful to

forensic scientists. SNPs are common, occurring every 100 to 300 bases along the entire length of the human genome. Mutations in SNPs are very rare, so the sequences tend to be passed unchanged across generations. But because any given SNP is relatively common in the population, an analyst must examine dozens of SNPs to derive a true DNA fingerprint. For this reason, SNP analysis is rarely used in forensic cases.

