Intronic SNP

National Cancer Institute

Source

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Single Nucleotide Polymorphism in Intronic Sequences (Intronic SNP) consists of a variation at an appreciable frequency between individuals of a single interbreeding population of a single nucleotide, due to base substitution, at an equivalent location within a transcribed non-coding intervening DNA sequence separating protein-coding sequences (exons) in an eukaryotic nuclear gene. Poorly conserved and of variable length and number, intron sequences are removed from nascent message RNA transcripts in the nucleus after the 5' cap and polyA tail have been added. Self-complementary sequences at exon-intron junctions form a hairpin structure recognized by enzymes that splice exons together into a mature mRNA that is ready for translation in the cytoplasm. When the intron is removed, the donor junction at the 5' end of the intron is spliced to the acceptor junction at the 3' end of the intron.