

Mutations

Point mutations involve the substitution of an incorrect nucleotide (base), or the insertion or deletion of a single nucleotide in DNA.



When an insertion or deletion of a nucleotide throws off the "reading frame", wrong codons are read. This is a frameshift mutation.



Missense mutations result when the wrong codon is produced leading to the placement of an incorrect amino acid in the protein.

Nonsense mutations result in a stop codon replacing a codon for an amino acid.



Silent mutations result in a base substitution that does not change the amino acid sequence because some amino acids have multiple codons.

AAA

missense — — —

nonsense — — —

silent — — —

