

Many different approaches have been used for identifying known mutations. Essential components of polymerase chain reaction are template DNA, primers (a pair of synthetic oligonucleotides complementary to the two strands of target DNA), thermostable DNA polymerase enzyme (e.g. Taq), divalent cations (usually Mg^{2+}), deoxynucleoside triphosphates (dNTPs) and buffer solution. Polymerase chain reaction (PCR) and its versions: In 1980s, Dr Mullis introduced a method for amplifying DNA fragment to a large number of fragments in only a few hours; this method, named polymerase chain reaction (PCR), was a critical point in molecular biology[29,30]. These steps are as follow: Initial de