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EDVO-Kit #

## PCR-based VNTR Human DNA Typing

### Storage:

See page 2 for specific instructions.

### Experiment Objective:

The objective of this experiment is to use PCR to amplify a specific VNTR region of human DNA and determine the number of repeats in that region. This is done by comparing the PCR products to a DNA ladder and measuring the size of the bands.

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# BACKGROUND INFORMATION

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PCR is a technique used to amplify a specific DNA sequence. It involves repeated cycles of heating and cooling to separate DNA strands and synthesize new strands. The process is highly specific and sensitive, allowing for the detection of even small amounts of DNA. PCR is widely used in molecular biology, forensic science, and clinical diagnostics.

The PCR process consists of three main steps: denaturation, annealing, and extension. Denaturation involves heating the DNA to separate the strands. Annealing involves binding of primers to the single-stranded DNA. Extension involves synthesis of a new DNA strand by DNA polymerase. The process is repeated for multiple cycles to amplify the DNA. PCR is a powerful tool for DNA analysis and is used in a variety of applications, including genetic testing and forensic identification.







