

# Recombinase Polymerase Amplification (RPA)

## A breakthrough alternative to PCR

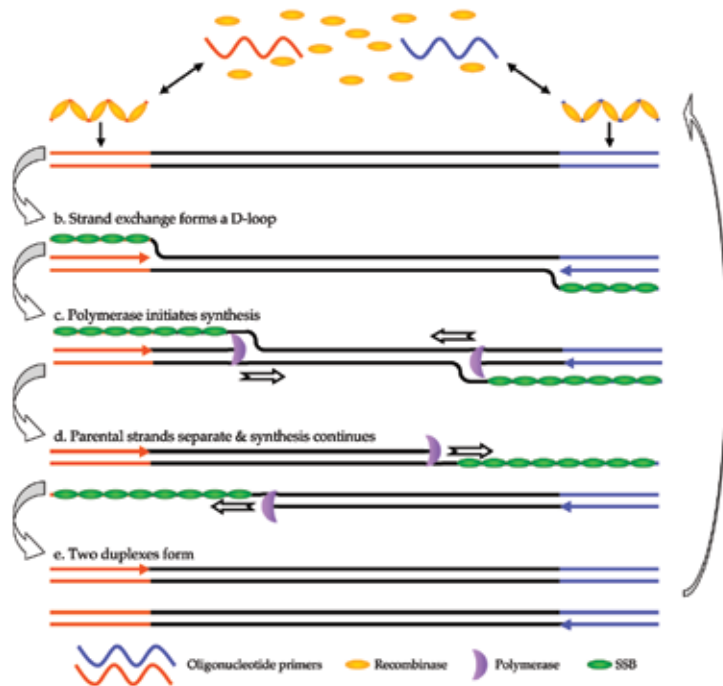
### The RPA Process

RPA replaces PCR with a rapid isothermal enzymatic process. RPA uses a recombinase to pair oligonucleotide primers to a DNA template and a polymerase to synthesize daughter strands, resulting in exponential product accumulation. RPA products can be detected in real-time using fluorescent probes or by end-point methods such as lateral flow strips or gel electrophoresis.

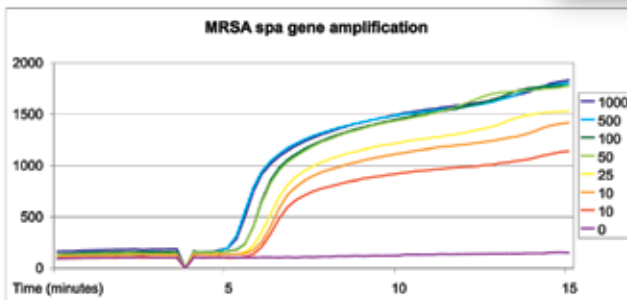
### The RPA Cycle

All steps operate at low constant temperature (optimum 37°C)

a. Recombinase/oligonucleotide primer complexes form and target homologous DNA



### Speed & Specificity



- Ultra-fast detection
- Single molecule sensitivity

### Benefits of RPA

- Speed - Results in 10 to 15 minutes
- Sensitive - Single molecule detection
- Low cost - Little or no hardware required
- Simple - Stable lyophilised reagents
- Robust - To sample contaminants and temperature fluctuations
- Portable - Battery powered instrument or disposable test format

# TwistDx

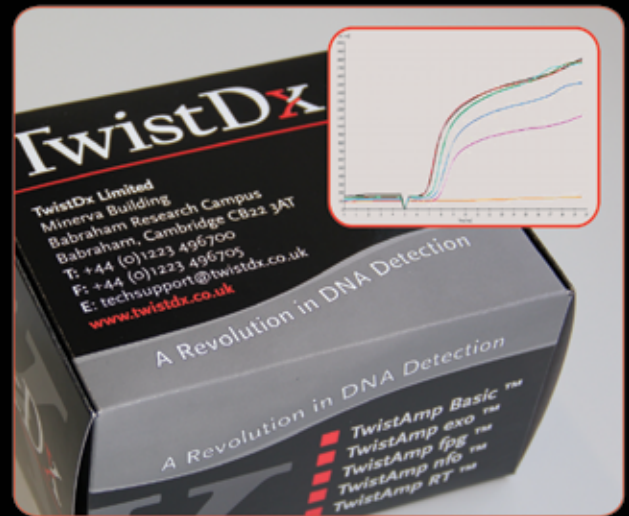
[helen@twistdx.co.uk](mailto:helen@twistdx.co.uk)

[www.twistdx.co.uk](http://www.twistdx.co.uk)

# How can you access RPA technology?



a. TwistAmp™ Basic



b. TwistAmp™ fpg & exo



c. TwistAmp™ nfo



d. Real time portable heated fluorometer; The Twista™ or any real-time PCR machine

# TwistDx

A Revolution in DNA Detection

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