

PROKARYOTIC REPLICATION

- ➔ Replication in prokaryotes is much better understood than replication in eukaryotes.
- ➔ The basic requirements and components of replication are the same for prokaryotes as for eukaryotes.

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SUBSTRATES

- ➔ The four deoxyribonucleoside triphosphate.



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TEMPLATE

- ➔ Both the strands of DNA double helix serve as template for the synthesis of new daughter DNA strands.



ENZYMES AND PROTEINS

DNA B protein (Helicase)

- Unwinds DNA

Primase

- Synthesizes RNA primer

DNA topoisomerase I & II

- Relieves torsional strain by cutting & joining single strand or both strands.

ENZYMES AND PROTEINS

DNA polymerase

- DNA chain elongation

DNA ligase

- Joins Okazaki fragments

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ENZYMES AND PROTEINS

DNA A protein

- Opens duplex at origin of replication

SSB (Single strand binding protein)

- Binds separated single stranded DNA and stabilizes it.

Ter binding protein

- Prevents the helicase from further unwinding and facilitates termination

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