Contents

Activities in elongation in DNA replication

- Formation of deoxyribonucleotide trimonophosphate
- Formation of RNA primer
- Formation of leading strand
- Formation of lagging strand

Source of nucleotides in elongation in DNA replication

Nucleoplasm

Phosphorylation in DNA replication

Conversion of deoxyribonucleotide monophosphate into deoxyribonucleotide trimonophosphate

Expression of reaction of conversion of deoxyribonucleotide monophosphate

$$\mathrm{DNMP} + \mathrm{ATP} \xrightarrow{\mathrm{Phosphorylase}} \mathrm{DNTP} + \mathrm{H_3PO_4}$$

Products used as nucleotides in elongation in DNA replication

- Deoxyribonucleotide trimonophosphate
- Phosphoric acid

Reactants in conversion of deoxyribonucleotide monophosphate

- Deoxyribonucleotide monophosphate
- ATP
- Phosphorylase

Enzyme needed for the synthesis of RNA primer in DNA replication

- Phosphorylase

Function of RNA primer in DNA replication

- Stepping stone for replication

Location of formation of RNA primer at DNA replication

- Origin of replication

Enzymes functioning as catalyst in DNA replication

- DNA polymerase

Direction of formation of complementary strand in DNA replication

5' - 3'

Leading strand in DNA replication

Strand having continuous addition of nucleotides

Okazaki fragements in DNA replication

Fragements of nuclotides in 3' - 5' strand

Enzyme needed for joining Okazaki fragements

Ligase

Lagging strand in DNA replication

Strand having discontinuous addition of nucleotides

Function of phosphorylase in DNA replication

Conversion of deoxyribonucleotide monophosphate to deoxyribonucleotide trimonophosphate

Function of DNA polymerase

Catalyse elongation

Function of ligase in DNA replication

Join okazaki fragements