T4 DNA Recombinant Protein

RPPB2404

Product Information

Product SKU:
RPPB2404

Host:
Escherichia
Colilambda lysogen
NM 989.

Protein Information

Protein description:
T4 DNA Ligase catalyzes the formation of a phosphodiester bond between juxtaposed 5' -phosphate and 3' -hydroxyl termini in duplex DNA or RNA. This enzyme will join blunt end and cohesive end termini as well as repair single stranded nicks in duplex DNA, RNA or DNA/RNA hybrids.

Appearance:
Sterile filtered liquid formulation having a concentration of 167,000 U/ml.

Synonyms:
DNA ligase 4, EC 6.5.1.1, DNA ligase IV, Polydeoxyribonucleotide synthase [ATP] 4.

Formulation:
50mM Tris-HCl (pH 7.8 at 25°C), 10mM MgCl2, 10mM DTT, 1mM ATP, 25 µg/ml BSA and DNA (0.1 to 1 µm in 5´ termini). Optimal ligation occurs at 16C.

Biological Activity:
One Weiss unit is equivalent to circa 67 cohesive-end ligation units.• T4 DNA Ligase is strongly inhibited by NaCl or KCl if the concentration is > 200mM.• Ligation of blunt-ended and single-base pair overhang fragments requires about 50 times as much enzyme to achieve the same extent of ligation as cohesive-end DNA fragments. Blunt-end ligation may be enhanced by addition of PEG 4000 (10% w/v final concentration) or hexamine chloride, or by reducing the ATP concentration to 50µM.• To dilute T4 DNA Ligase that will subsequently be stored at –20°C, 50% glycerol storage buffer should be used; to dilute for immediate use, 1x T4 DNA Ligase reaction buffer can be used.