

T4 RNA Ligase 2 (dsRNA Ligase)

CATALOG NO.: M1219-100
AMOUNT: 1000 U (100 µl)
CONCENTRATION: 10 U/µl
PRODUCT SOURCE: Recombinant *E. coli*
FORM: Liquid

HEAT INACTIVATION: N/A

KIT COMPONENTS:

Components	Volume	Part No.
T4 RNA Ligase 2 (dsRNA Ligase)	100 µl (1000 U)	M1219-XX-1
10X T4 RNA Ligase 2 (dsRNA Ligase) Reaction Buffer	300 µl	M1219-XX-2

DESCRIPTION:

T4 RNA Ligase 2 (dsRNA Ligase) catalyzes the ATP-dependent formation of a 3'→5' phosphodiester bond catalyzing intramolecular and intermolecular RNA strand joining. Unlike T4 RNA Ligase 1 (M1218-100) which ligates single-stranded RNA, T4 RNA Ligase 2 joins nicks on double-stranded RNA and can also ligate the 3'OH of RNA to the 5' phosphate of DNA in a double stranded structure.

APPLICATIONS:

1. RNA 3'-termini labelling with cytidine 3',5'-bis [alpha-32P] phosphate
2. Intermolecular and intramolecular joining of RNA and DNA
3. Incorporation of unnatural amino acids into proteins
4. Synthesis of oligoribonucleotides and oligodeoxyribonucleotides
5. 5'- and 3'-end mapping of mRNA

UNIT DEFINITION:

One unit is defined as the amount of T4 RNA Ligase 2 that ligates 0.4 µg of an equimolar mix of a 23-mer and 17-mer RNAs in a total reaction volume of 20 µl in 30 minutes at 37°C.

STORAGE BUFFER:

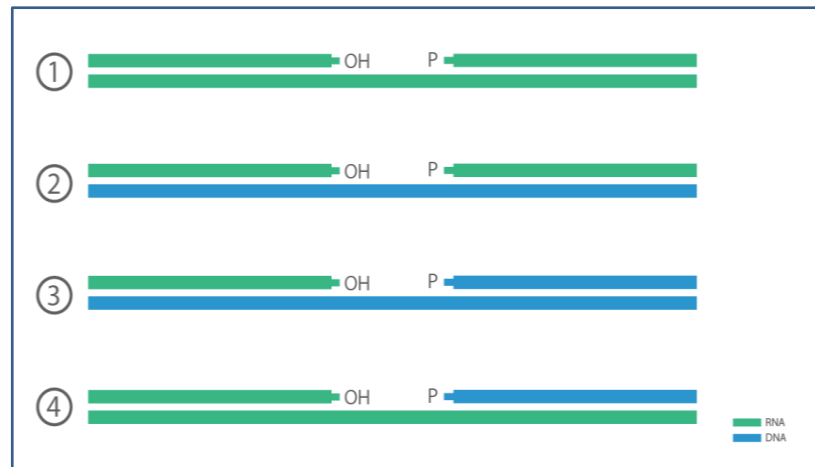
10 mM Tris-HCl (pH 7.5), 50 mM KCl, 0.1 mM EDTA, 1 mM DTT, 35 mM (NH4)₂SO₄ and 50% (v/v) Glycerol.

STORAGE CONDITIONS:

Store at -20°C. Avoid repeated freeze-thaw cycles of all components to retain maximum performance. All components are stable for one year from the date of shipping when stored and handled properly.

10X T4 RNA LIGASE 2 (DSRNA LIGASE) REACTION BUFFER COMPONENTS: 500 mM Tris-HCl, 20 mM MgCl₂, 10 mM DTT, 4 mM ATP, pH 7.5

REACTION CONDITIONS: Use 1X T4 RNA Ligase 2 (dsRNA Ligase) Reaction Buffer and incubate at 37°C.



RELATED PRODUCTS:

- New T4 DNA Ligase M1247-200
- T4 DNA Ligase (5 u/µl) 9101-250
- T4 RNA Ligase 1 (ssRNA Ligase) M1218-100
- T4 RNA Ligase 2 (Truncated) M1220-100

FOR RESEARCH USE ONLY! Not to be used on humans.