

## T4 UvsX Recombinase

REF: EG20130S

### Storage Condition

-20°C

### Components

Component	Amount
T4 UvsX Recombinase (5 mg/ml)	100 µl

### Description

T4 UvsX Recombinase, derived from T4 bacteriophage, is a homolog of the RecA/Rad51 recombinase family with a molecular weight of 59 kDa. The RecA/Rad51 recombinase family plays a crucial role in the repair of double-stranded DNA breaks and the restart of replication forks. UvsX and other recombinases form presynaptic filaments on ssDNA that are activated to search for homology in dsDNA and to perform DNA strand exchange. In combination with other related proteins, UvsY can facilitate isothermal amplification reactions.

### Quality Control Assays

#### Protein Purity

The enzyme is ≥95% pure as determined by SDS-PAGE analysis using Coomassie Blue staining.

#### Endonuclease Activity

A 20 µl reaction containing 200 ng of supercoiled plasmid and 5 µg of T4 UvsX Recombinase incubated for 4 hours at 37°C results in <10% conversion to the nicked or linearized form as determined by agarose gel electrophoresis.

#### Non-specific Nuclease Activity

A 20 µl reaction containing 15 ng of dsDNA fragments and 5 µg of T4 UvsX Recombinase incubated for 16 hours at 37°C results in no detectable degradation of the dsDNA fragments as determined by agarose gel electrophoresis.

#### RNase Activity

A 10 µl reaction containing 500 ng of RNA and 5 µg of T4 UvsX Recombinase incubated for 1 hour at 37°C results in >90% of the substrate RNA remains intact as determined by agarose.

#### Residual Host DNA

The product was tested by TaqMan qPCR with primers specific for the *E.coli* 16S rDNA, and the results show that the *E.coli* genome residues less than 10 copies.

### Heat Inactivation

Incubation at 60°C for 10 minutes.