

The Most Versatile Transposition System

EPICENTRE offers a choice of EZ::TN™ Insertion Kits because sequencing is often just part of your research project. In addition to primer binding sites and a selectable marker each of the EZ::TN Transposons included in these kits contain features that can be used in gene analysis, proteomics or RNA research. But that's not all. You can also make your own transposon using the EZ::TN™ pMOD™-2<MCS> Transposon Construction Vector.

Find Functional Domains or Epitopes of Proteins

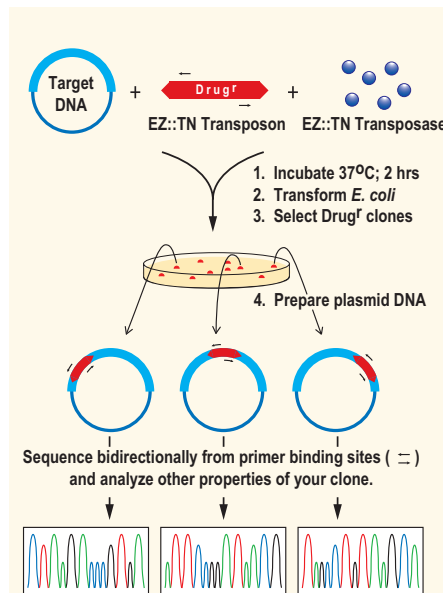
The EZ::TN™ In-Frame Linker Insertion Kit was designed to rapidly and easily produce random 19-amino acid (19 codon; 57-nucleotide) in-frame insertions into genes of expressed proteins for protein engineering, functional analysis, and domain or epitope mapping. The kit features the EZ::TN™ <Not I/KAN-3> Transposon, which contains a kanamycin resistance marker flanked by *Not* I restriction sites. Kanamycin-resistant insertion clones are digested with *Not* I, ligated, and re-transformed into *E. coli*. Since each resulting clone contains a random 19-codon insertion that can be read in all three reading frames the protein retains its original amino acid sequence on both sides of the insertion site.

Synthesize RNA from Any Region of Your Cloned DNA

The EZ::TN™ <T7/KAN-2> Promoter Insertion Kit provides an easy and reliable method to randomly insert a phage T7 RNA polymerase promoter into any target DNA. The transposon does not have a transcription termination sequence so RNA can be produced from chosen insertion clones by *in vitro* transcription using an AmpliScribe™ T7 High Yield Transcription Kit, or *in vivo* after transformation of *E. coli* having an inducible T7 RNA polymerase gene.

Insert a Conditional Origin of Replication

The EZ::TN™ <R6Kγori /KAN-2> Insertion Kit allows you to randomly insert the *E. coli* R6Kγ conditional origin of replication into target DNA *in vitro*. The target can then be propagated as independently replicating DNA in *E. coli* hosts expressing the *pir* gene product such as TransforMax™ *pir*⁺ or TransforMax™ *pir*-116 Electrocompetent *E. coli*.



The process for generating insertion clones for sequencing and a myriad of other applications using an EZ::TN™ Insertion Kit or your own custom EZ::TN™ Transposon. The EZ::TN Transposon insertion reaction is a simple, one-step enzymatic reaction that randomly inserts an EZ::TN Transposon into your plasmid, cosmid or BAC clone. Transform *E. coli* (e.g., TransforMax™ EC100™ Electrocompetent *E. coli*) with an aliquot of the reaction and select for EZ::TN Transposon insertion clones. Prepare sequencing template from randomly chosen clones and sequence each bidirectionally using a single set of sequencing primers that are homologous to the ends of the inserted EZ::TN Transposon. Continue to analyze your insertion clone using the other unique features contained on the transposon.

EZ::TN™ In-Frame Linker Insertion Kit

EZI04KN 10 Reactions

For sequencing cloned DNA then generating random 19 amino acid in-frame insertions into the encoded protein.

EZ::TN™ <T7/KAN-2> Insertion Kit

EZI03T7 10 Reactions

For random insertion of a T7 transcription promoter.

EZ::TN™ <R6Kγori /KAN-2> Insertion Kit

EZI011RK 10 Reactions

For random insertion of the *E. coli* R6Kγ origin of replication.

Make Your Own Transposon

A custom EZ::TN Transposon containing any DNA sequence of interest (e.g. selectable marker, control element, gene, cDNA) can be quickly and easily prepared using the EZ::TN™ pMOD™-2 <MCS> Transposon Construction Vector. To prepare your transposon, clone the DNA of interest into the multiple cloning site and then release the transposon by PCR or by digestion with *Pvu* II or *Psh* A I. The Transposon can be used for *in vitro* insertion into any target DNA, or it can be incubated with EZ::TN™ Transposase to form an EZ::TN™ Transposome (see pages 1-3 of this Forum), for random insertion into the genomic DNA of living cells. Your custom transposon will also include primer binding sites at either end for bidirectional sequencing. No need to design your own primers.

EZ::TN™ pMOD™-2<MCS> Transposon Construction Vector

MOD0602 20 µg

Includes: pMOD™-2<MCS> Vector and the Forward and Reverse PCR Primers

EZ::TN™ Transposase

TNP92110 10 Units

pMOD™<MCS> Forward Sequencing Primer

MODFSP201 1 nmole

pMOD™<MCS> Reverse Sequencing Primer

MODRSP202 1 nmole

TransforMax™ EC100™ Electrocompetent *E. coli*

EC10005 5 x 100 µl
(10 electroporations)

EC10010 10 x 100 µl
(20 electroporations)

TransforMax™ EC100™ Electrocompetent *E. coli* have the highest transformation efficiency available and are function tested for optimal EZ::TN Insertion reaction results.