

Recombinación de Fago Lambda

Phage λ



X

E. coli



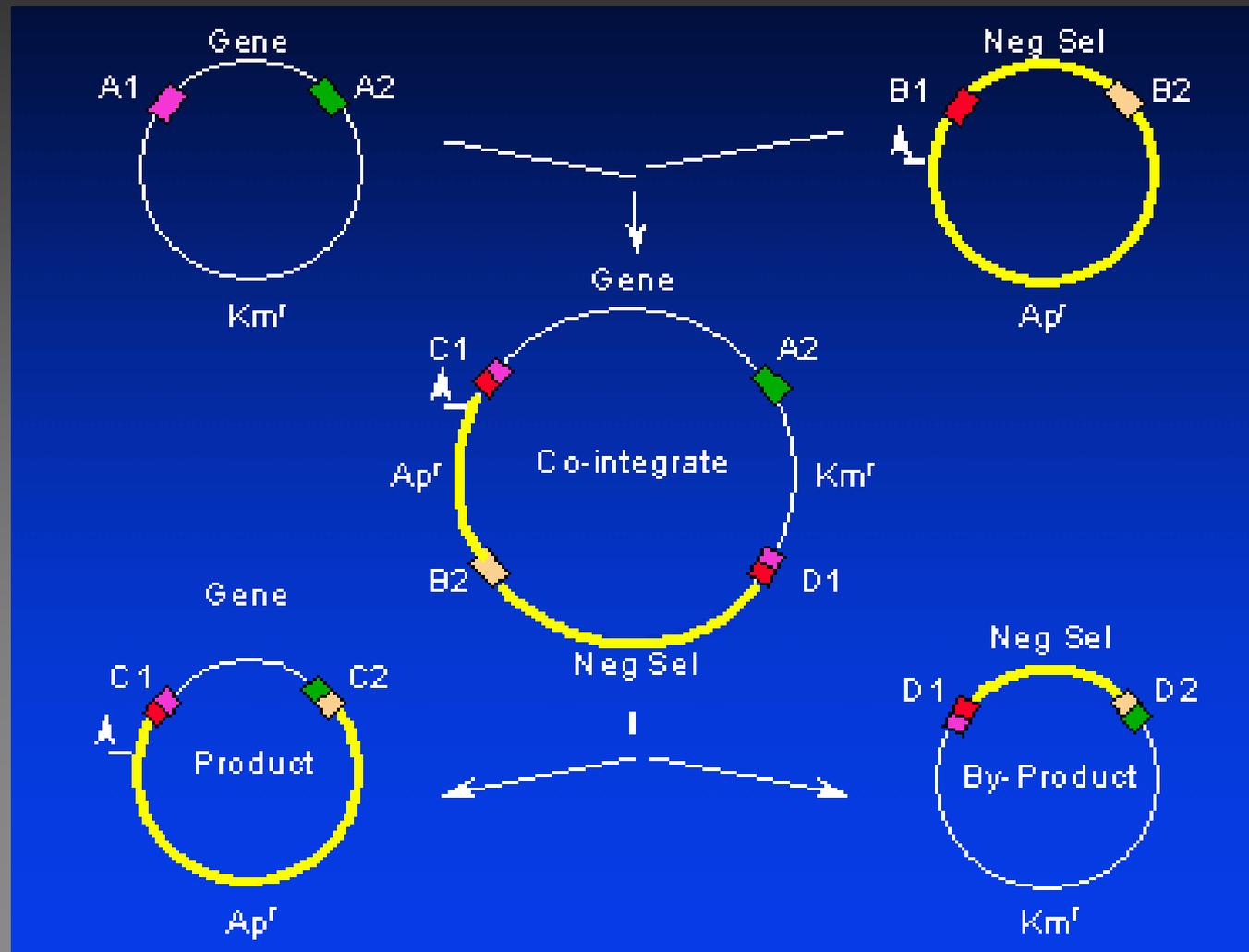
Integration
(Int, IHF)

Excision
(Int, IHF, Xis)

E. coli +
Phage λ

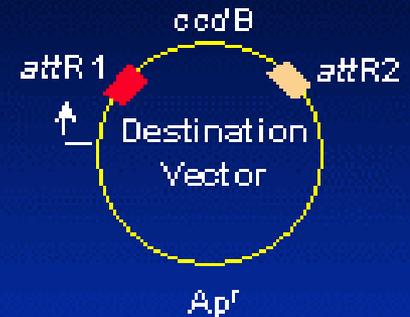


Usando recombinación sitio específica del sistema λ



Sistema Gateway

> 90-99% correct clones
on Km plates

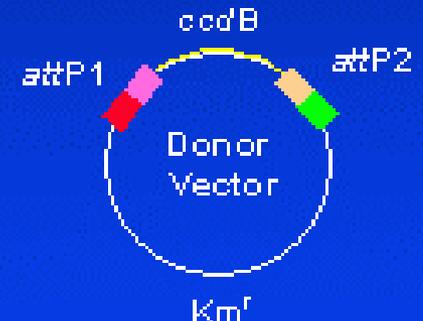
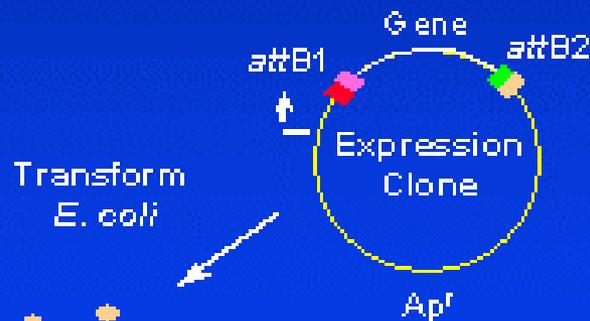


LR CLONASE
(Int, IHF, Xis)

attL x attR

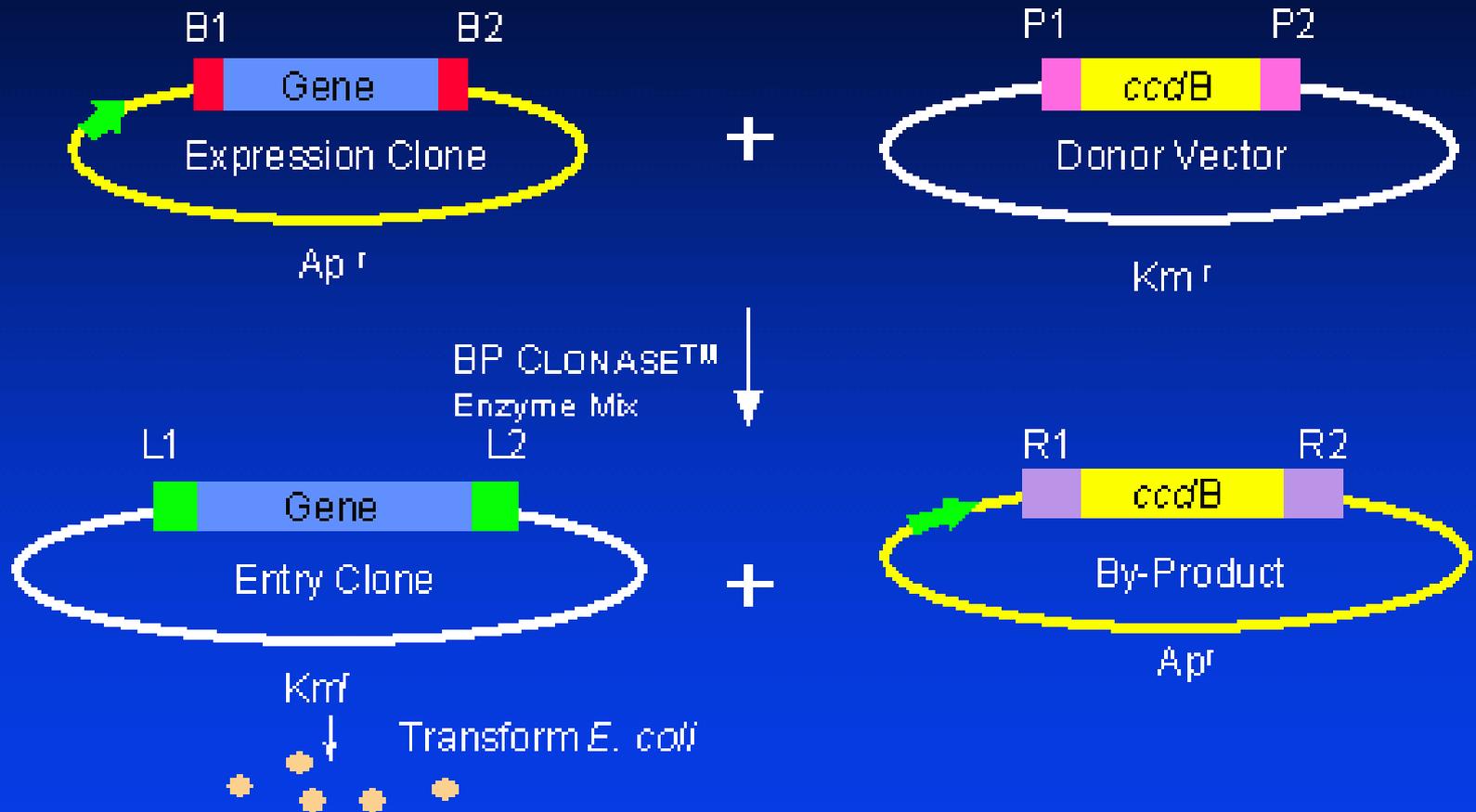
BP CLONASE
(Int, IHF)

attB x attP



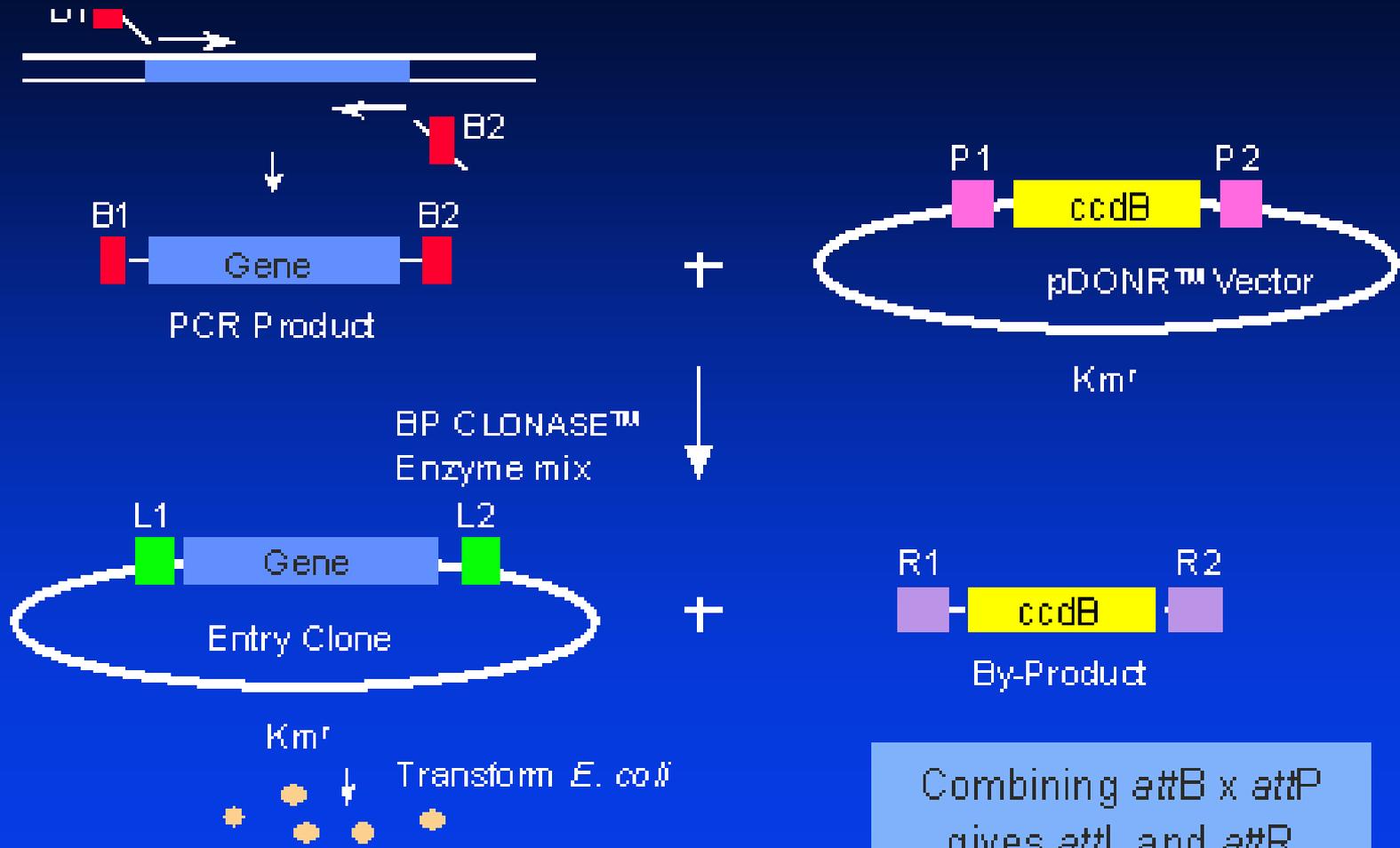
> 90-99% correct clones
on Ap plates

Reacción BP

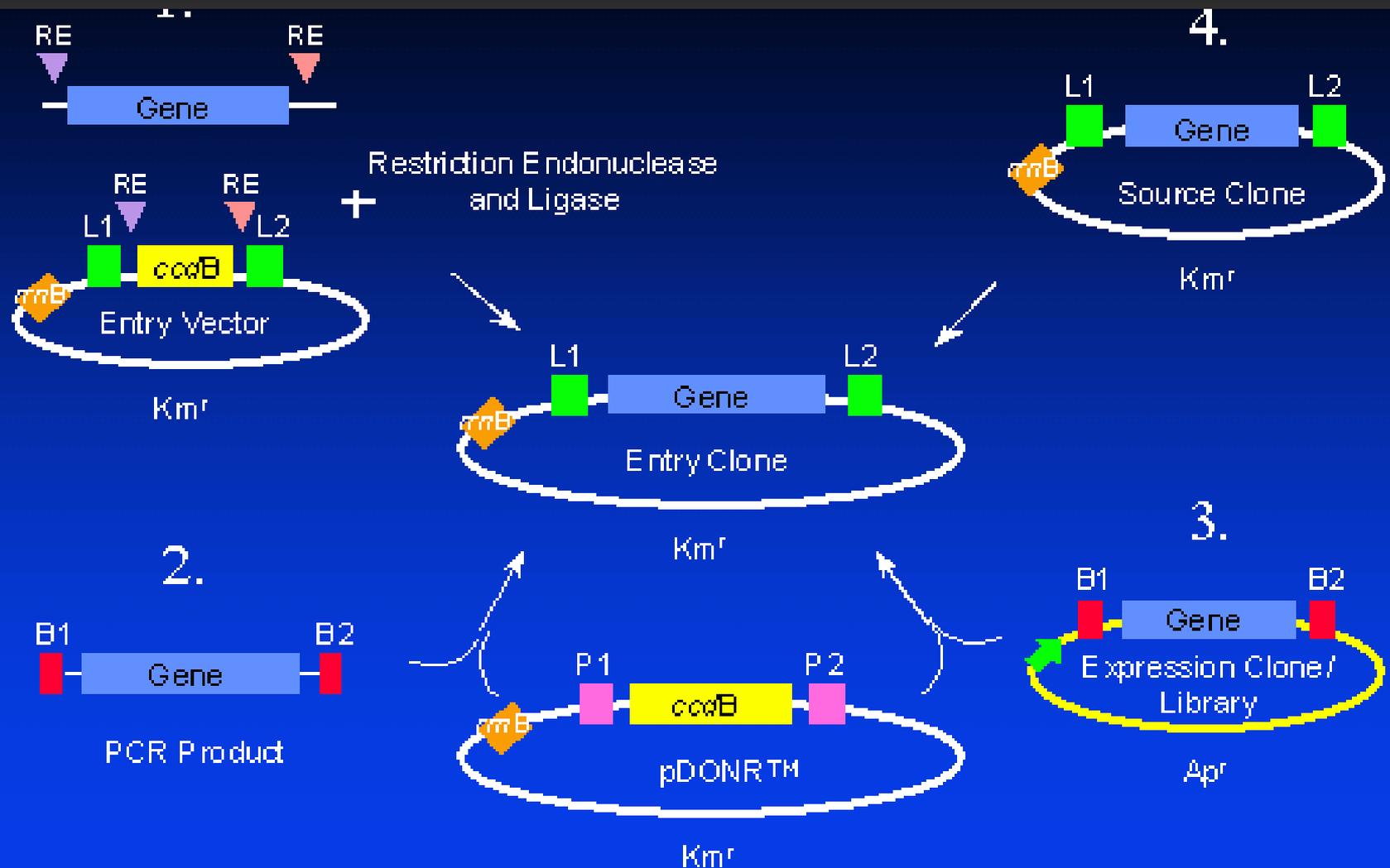


Typically > 90-99% correct clones in Km^r colonies next day

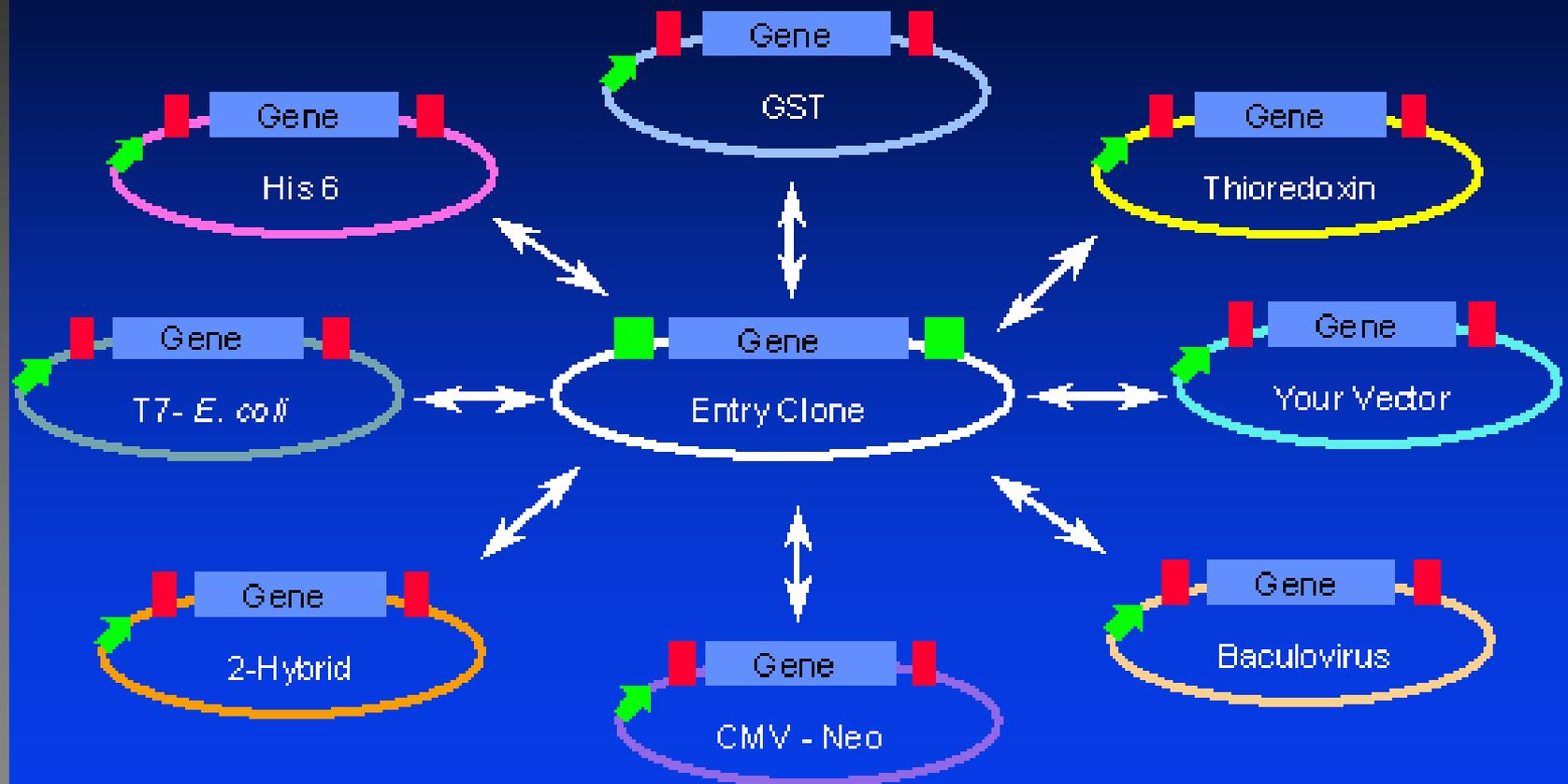
Clonado desde PCR



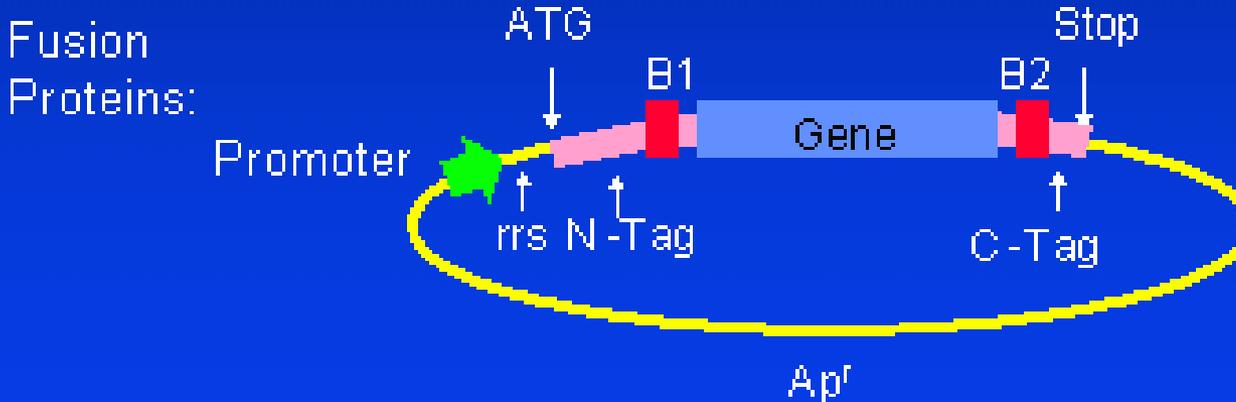
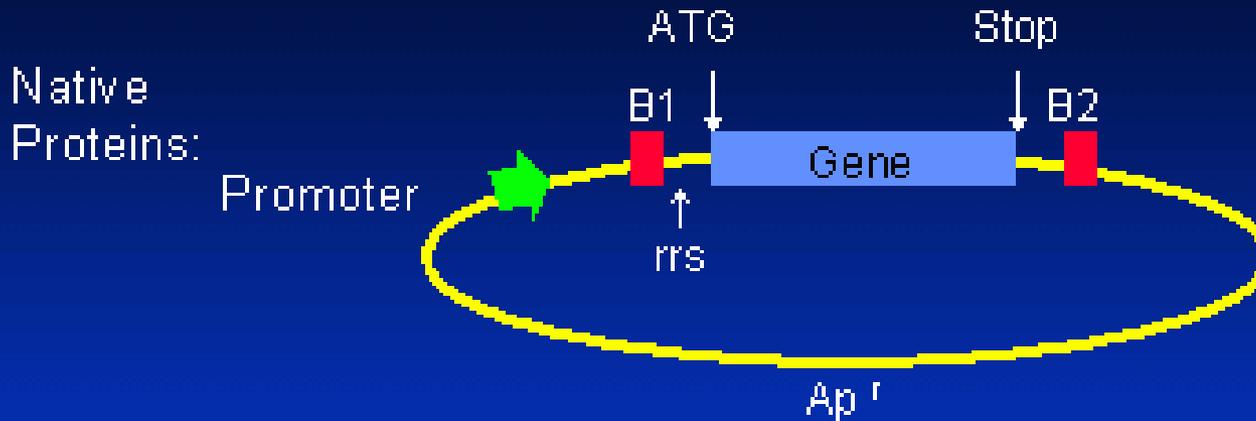
Generando el vector de entrada



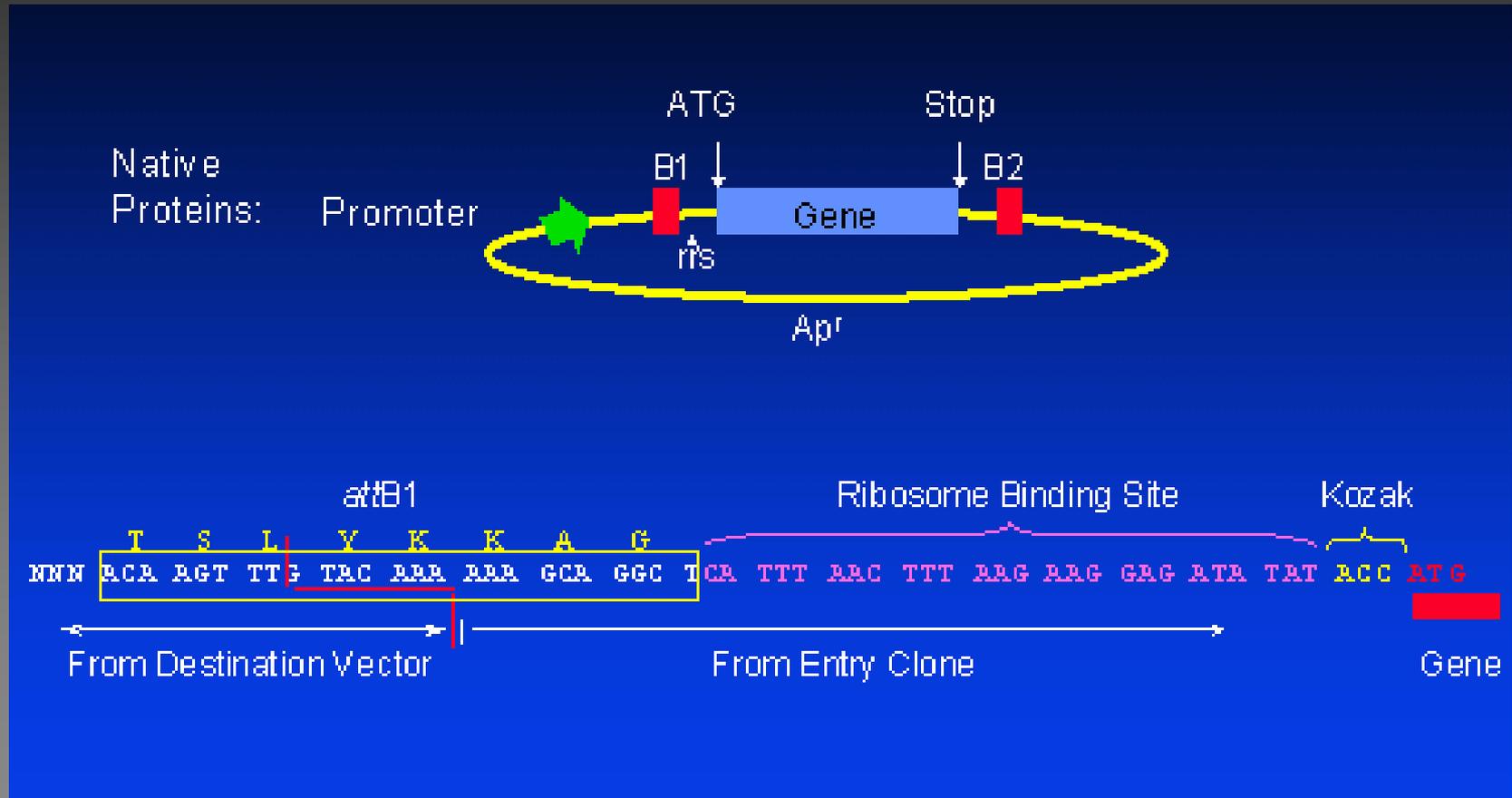
Subclonando desde el vector de entrada a multiples Vectores de expresi3n



Vectores de expresión



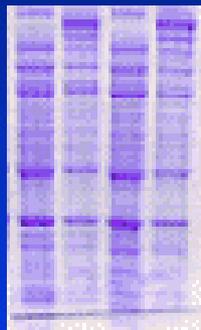
Región de recombinación en vector de expresión



Optimización de la expresión de β -Gal en diferentes vectores de expresión

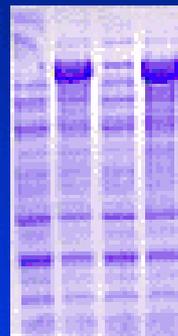
GST β -Gal Fusion

- + - +



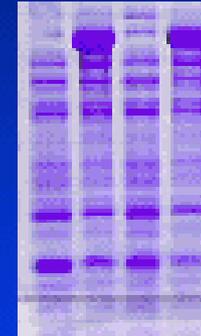
His6 β -Gal Fusion

- + - +



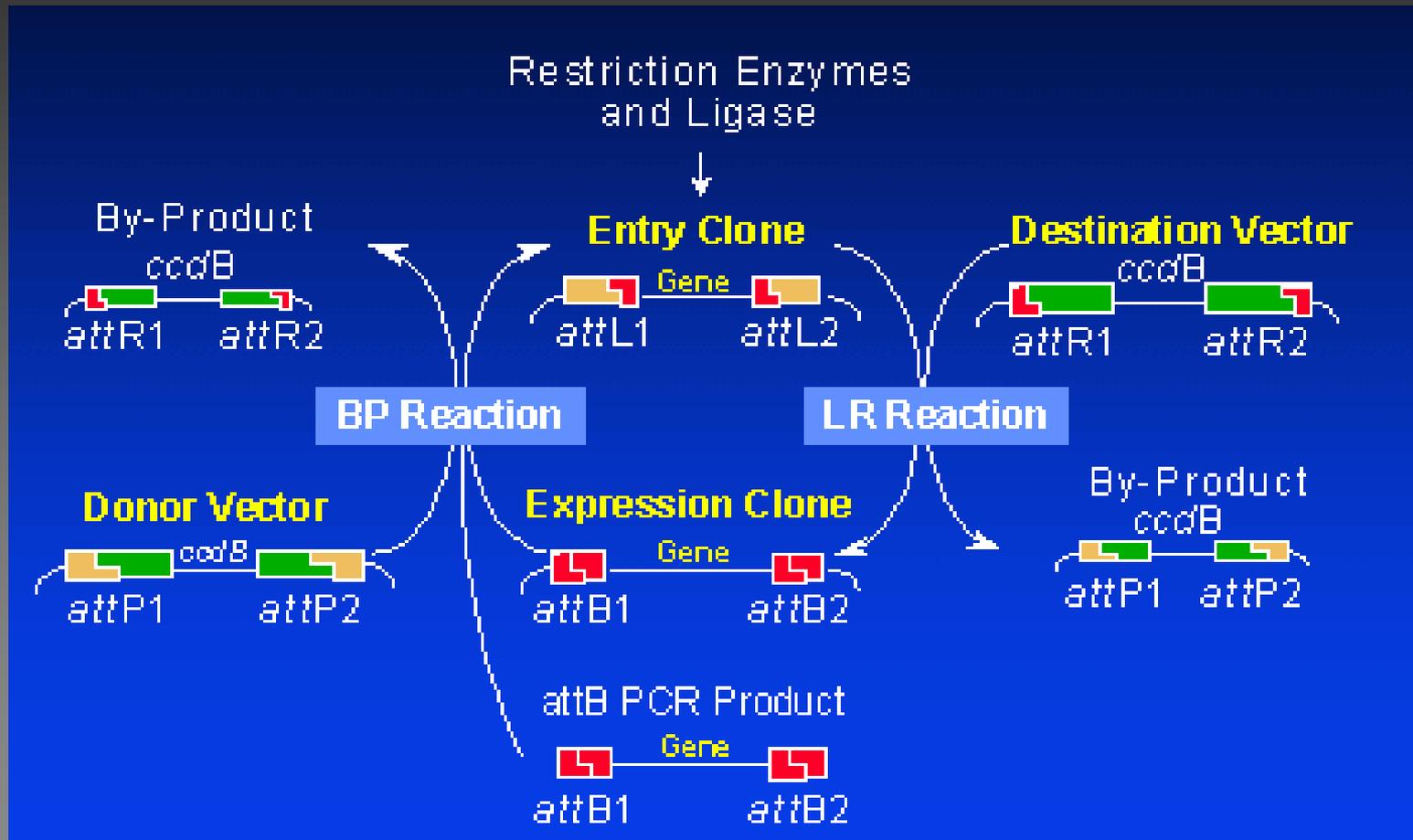
His6-Thioredoxin β -Gal Fusion

- + - +



* *E. coli* strain BL21-SI (T7 promoter)

Esquema general del uso del sistema Gateway



Esquema-pGem T

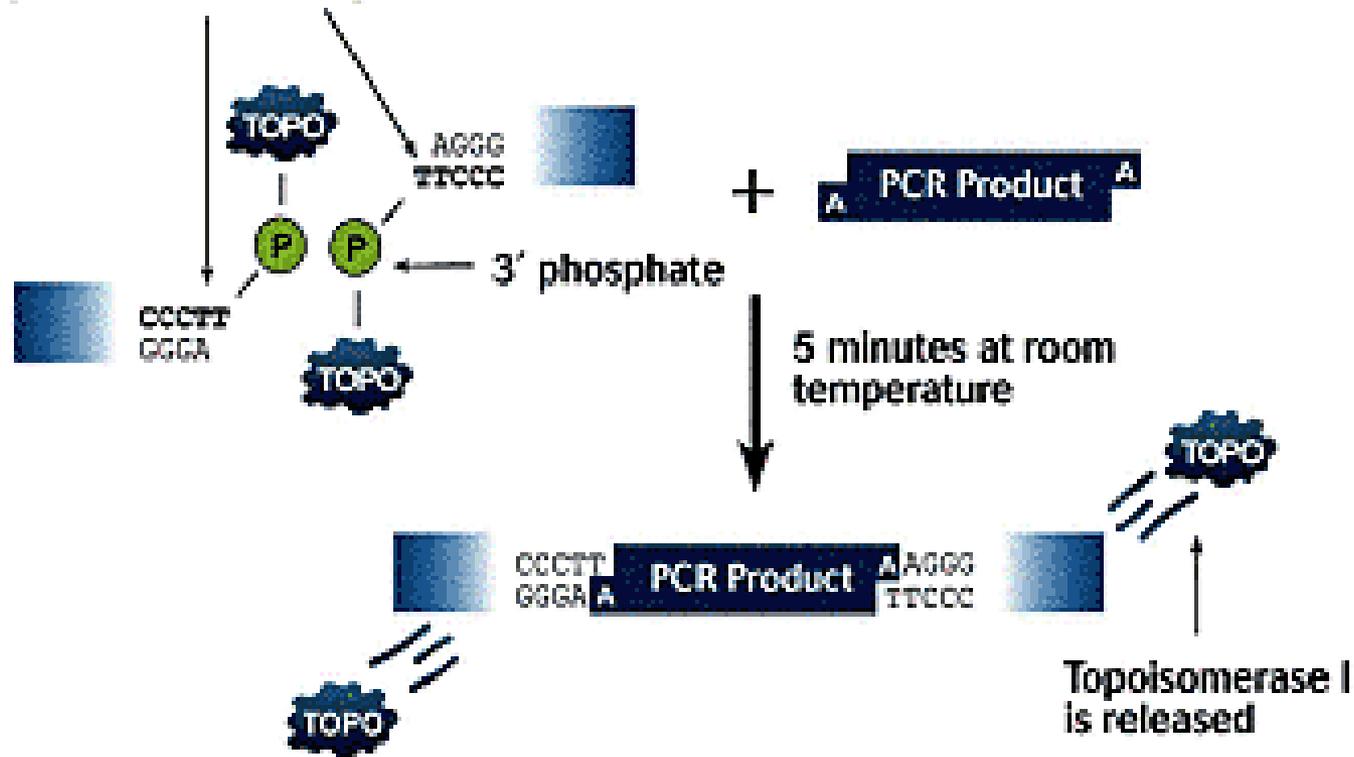
- Takes advantage of the terminal transferase activity of *Taq* DNA Polymerase
 - *Taq* adds single, 3'-A overhangs
 - TA Cloning® vectors are supplied linearized with single, 3'-T overhangs



- Enables direct ligation at high efficiencies

Detalles - SistemaTopo

Topoisomerase I recognition sites



Paso 1

- Generate PCR product containing TOPO® site at each end

Forward primer

5' CGGAACAAGGG →

Gene

← GGGAACTGAGT 5'

Reverse primer

PCR

5' CGGAACAAGGG

Gene

CCC TTGACTCA 3'

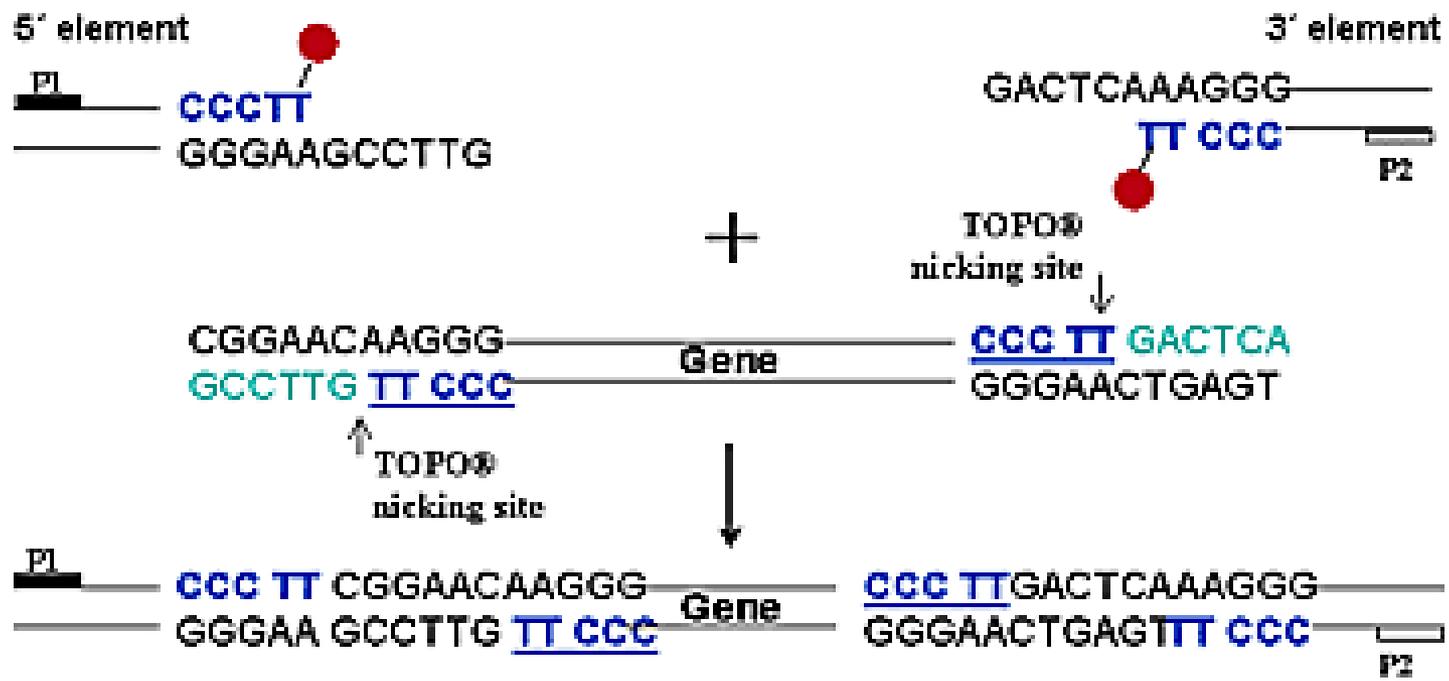
3' GCCTTG TT CCC

GGGAACTGAGT 5'

TOPO®

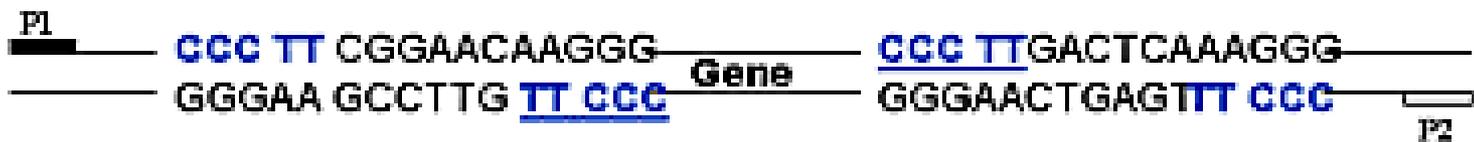
Paso 2

- Mix TOPO®-adapted elements and PCR product to create PCR template



Paso 3

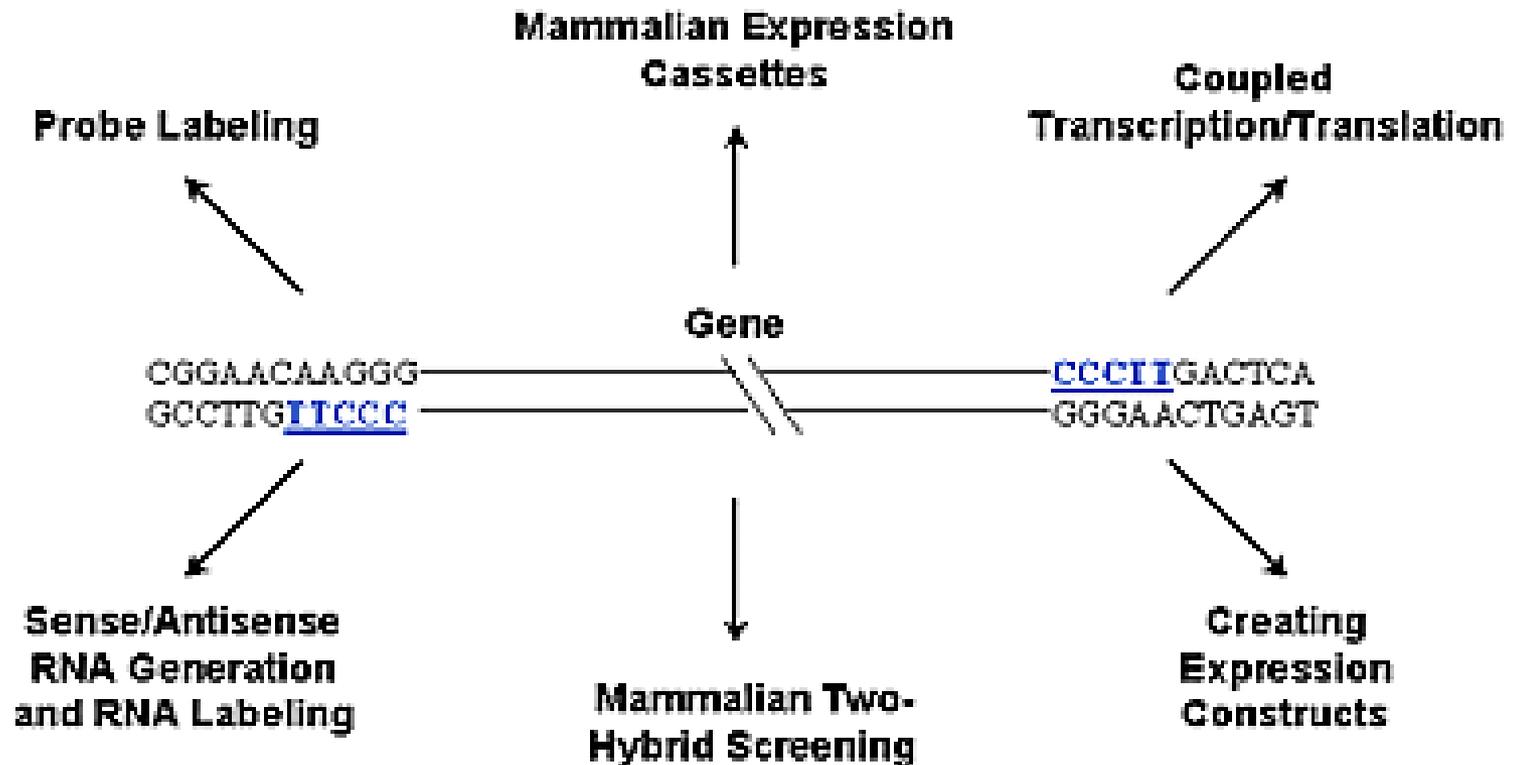
- PCR amplify template using element specific primers



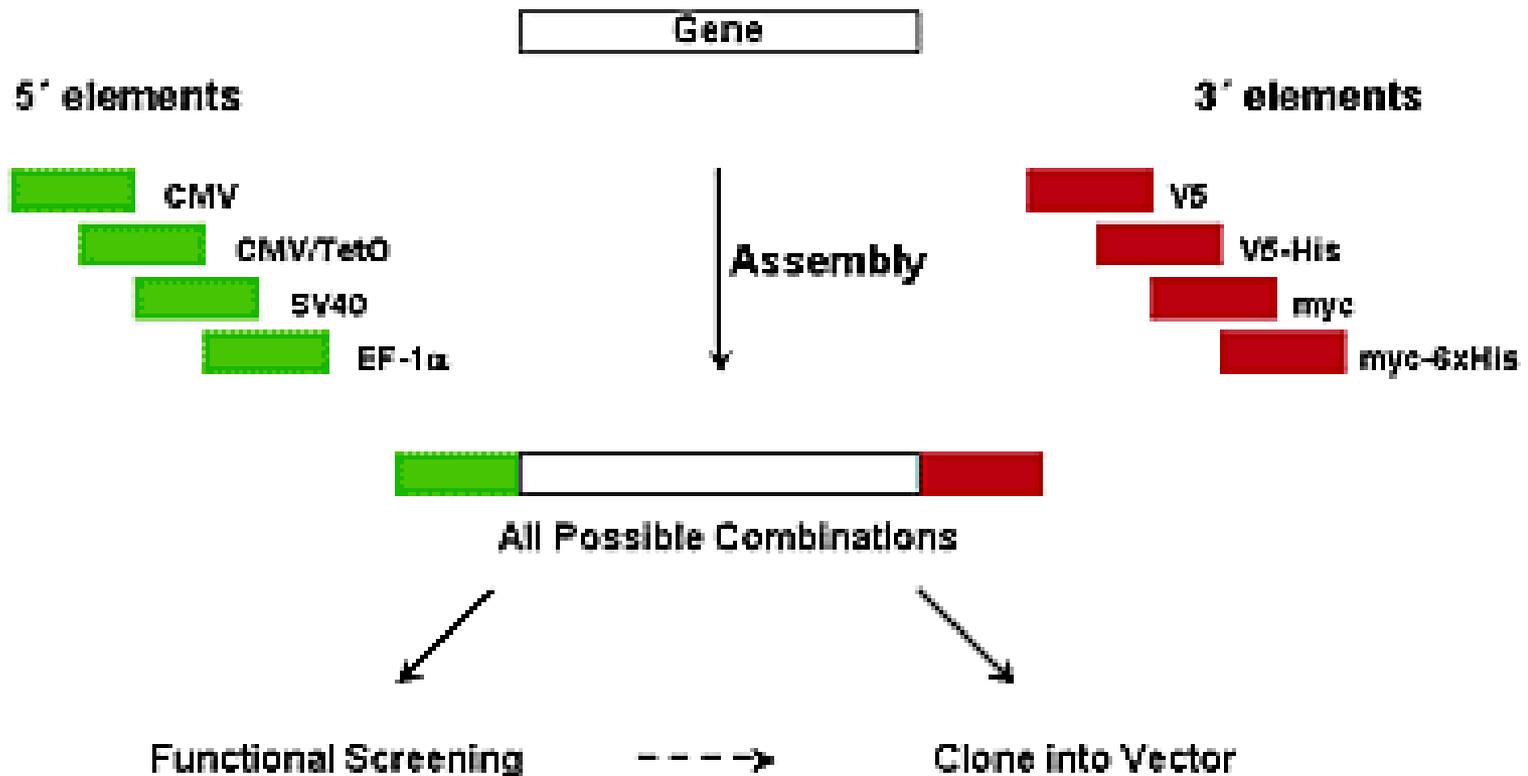
PCR with Primer 1 and Primer 2



Aplicaciones -*TOPO*



Flexibilidad



Gracias!!!