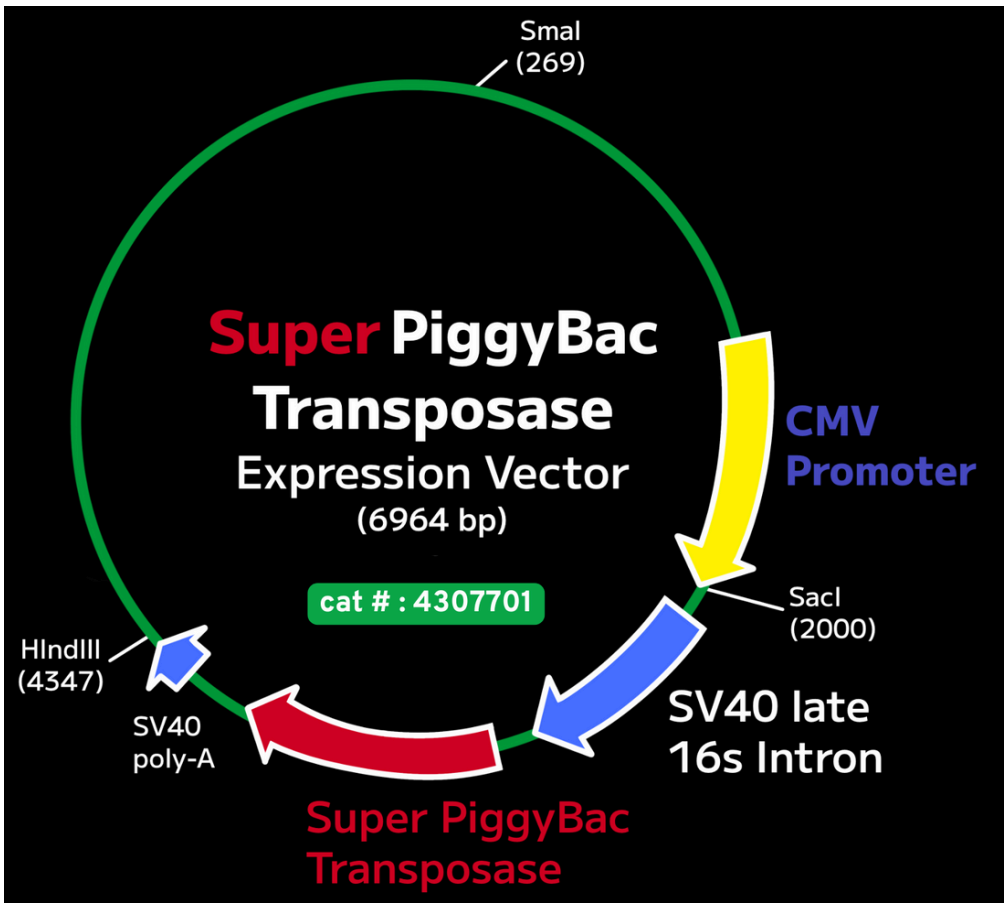
🧬 Super piggyBac™ Transposase Expression Vector User Guide

- **Catalog # : 4307701**
- **Format : 50 reactions | 10 µg DNA**
- **www.gentaur.com | support@gentaur.com**

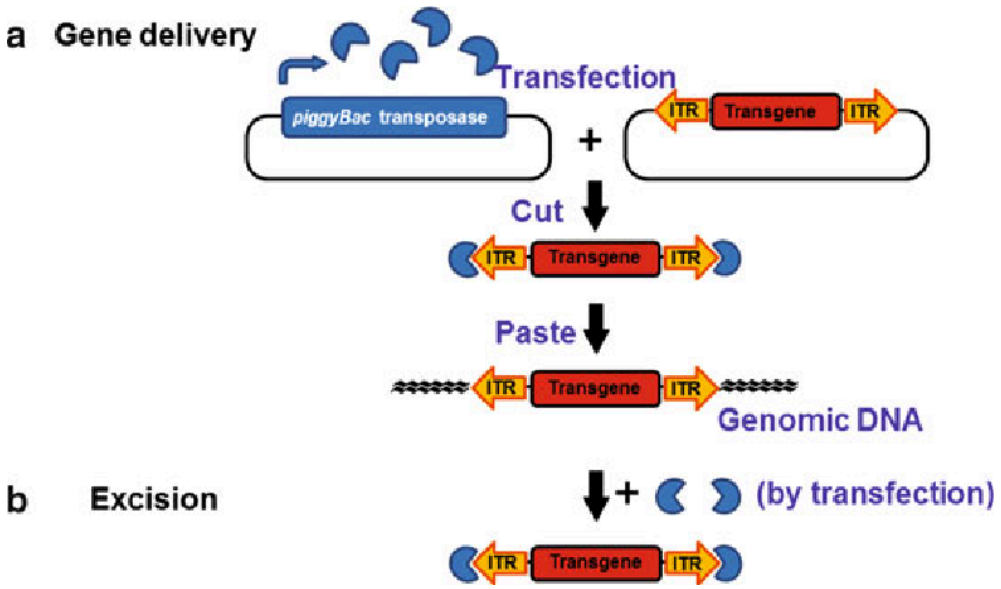
1. Product Overview

The Super piggyBac™ Transposase Expression Vector is a high-efficiency plasmid engineered for non-viral, footprint-free integration of transgenes into mammalian genomes. Replacing PB200A-1, this vector enhances stable gene delivery across a wide range of cell types.



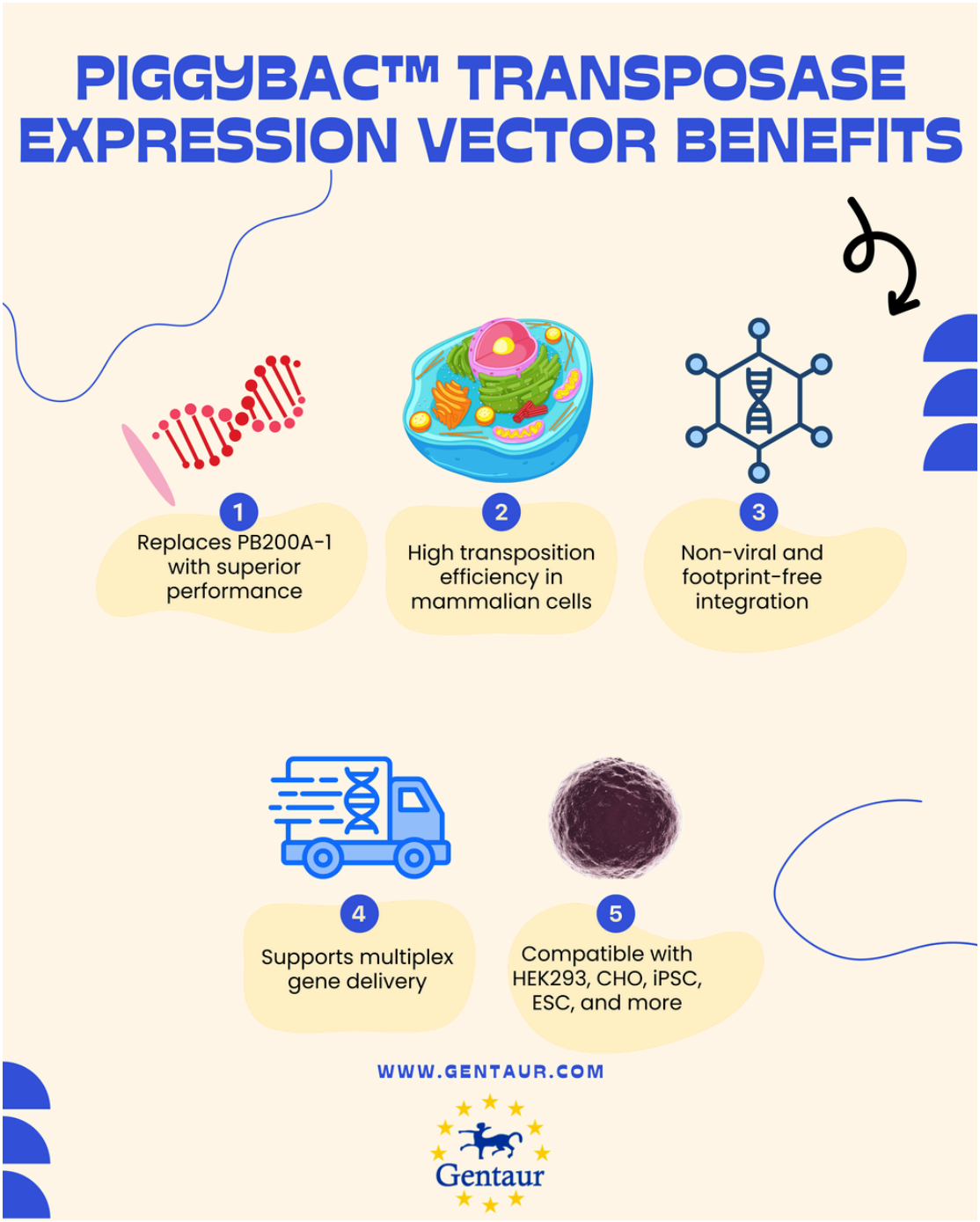
2. How piggyBac™ Works ?

piggyBac utilizes a transposase enzyme to mediate the cut-and-paste integration of DNA into TTAA sites within the genome. The process allows stable, reversible, and precise DNA insertion, ideal for applications requiring long-term expression or excision.



3. Key Features & Benefits

- Replaces PB200A-1 with superior performance.
- High transposition efficiency in mammalian cells.
- Non-viral and footprint-free integration.
- Supports multiplex gene delivery.
- Compatible with HEK293, CHO, iPSC, ESC, and more.



4. Kit Components

- **Super piggyBac™ Transposase Vector: 10 µg**
- **Nuclease-free water: 500 µL**
- **Digital protocol (PDF): Available on request**

5. Storage Conditions

- **Store at –20°C.**
- **Avoid multiple freeze-thaw cycles.**
- **Stable for 12 months if properly stored.**

6. Quick Start Protocol

1. Plate cells at ~70% confluency.
2. Mix 500 ng of transposase and donor vectors.
3. Transfect using a suitable reagent.
4. Incubate for 48–72 hours.
5. Assess integration via selection or reporter.

7. Detailed Protocol

- Follow recommended DNA ratios (1:1) and use transfection methods compatible with your cell line.
- Analyze integration by qPCR, fluorescence, or antibiotic resistance.

8. Applications

- Stable cell line generation
- CRISPR/Cas9 donor delivery
- Transgenic screening
- Stem cell engineering
- Non-viral gene therapy models

9. Safety & Handling

- For research use only.
- Not for diagnostic or therapeutic purposes.
- Handle with gloves and follow local safety regulations for genetically modified organisms.