



Applied StemCell

PRODUCT DATA SHEET

TARGATT™ CHO-K1 Knock-in Kit (H11) for Antibody Library Screening (FACS)

Catalog No. AST-1409 RUO • Rev. 1 | August 2026

Product Overview

The TARGATT™ CHO-K1 Knock-in Kit (H11) for Antibody Library Screening (FACS) is configured for mammalian display and quantitative library screening in CHO-K1 cells, with recovery of integrants by fluorescence-activated cell sorting.

The master cell line carries the attP docking site at the CHO H11 safe harbor locus. Library members cloned into the supplied attB donor plasmid integrate site-specifically, one variant per cell, giving a display library in which every member is expressed from the same genomic context.

Because integration using TARGATT™ technology is highly efficient, teams can build highly diverse libraries and perform mammalian display for screening in a biologically relevant, manufacturing-representative cell type.

Key Features & Benefits

Feature	Benefit
Mammalian display in CHO-K1	Screen in the cell type you will manufacture in, with representative folding and glycosylation
FACS-based sorting format	Quantitative selection on expression and binding phenotype, not just survival
One variant per cell at one defined locus	Clean genotype-to-phenotype linkage across the library
Site-specific integration at CHO H11	Uniform genomic context removes position-effect noise from ranking
Integration efficiency over 90% after selection	Supports highly diverse libraries with minimal diversity loss
Large cargo capacity — up to 50 kb in a single reaction	Full-length and multi-domain antibody formats
Consistent clone-to-clone expression	Pool-based workflows replace clonal purification
Positive control plasmid included	Verify performance before committing library material
Kit format precedes licensing	Evaluate the technology before committing to a commercial license

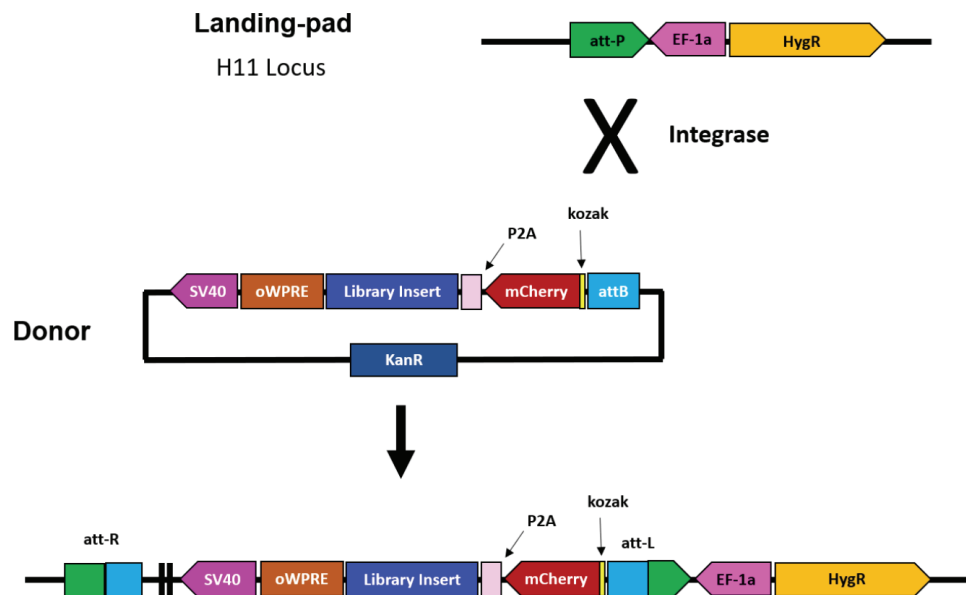
Product Specifications

Host cell line	CHO-K1
Integration site	CHO H11 safe harbor locus
Integration mechanism	Serine integrase; attP × attB; unidirectional and irreversible
Copy number	Single copy — one library variant per cell
Maximum insert size	Up to 50 kb in a single reaction; larger via nested reactions
Integration efficiency	>90% after selection
Screening format	FACS — the cloning plasmid in this kit contains mCherry
Parental cell line	CHO-K1 suspension cells
Transfection method	Neon™ electroporation, 1600 V / 30 ms / 1 pulse; 7.5 µg donor plasmid + 2.5 µg CAG integrase plasmid per reaction
Integration efficiency	~18% without drug selection (negative control ~1.60%)
Quality control	Certificate of Analysis provided with each shipment
Shipping conditions	Dry ice
Storage conditions	Master cell line: liquid nitrogen immediately upon receipt. Plasmids: -20°C; do not freeze-thaw repeatedly
Stability	At least 6 months from date of receipt when stored as directed
Product grade	Research use only

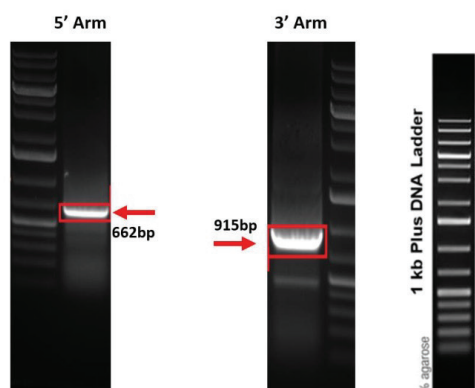
Applications

- Mammalian display antibody discovery
- Affinity maturation and epitope binning
- Bispecific and multi-domain format screening
- Expression-level and developability sorting

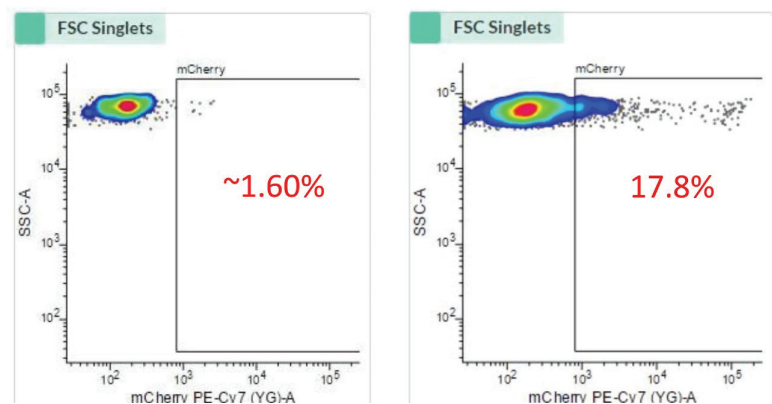
Supporting Data



Figures 1. Schematic representation of TARGATT™ site-specific transgene integration mediated by integrase in the TARGATT™ CHO-K1 master cell line. The TARGATT™ CHO-K1 (H11) master cell line was engineered with the attP landing pad at the CHO H11 safe harbor locus. The TARGATT™ donor vector containing the attB site is used to clone the transgene. The integrase from the TARGATT™ Integrase Plasmid catalyzes an irreversible reaction between the attP site in the genome and the attB site in the donor vector, resulting in site-specific integration of the gene of interest at the selected locus.



Figures 2. Genotyping of the 5'-arm and 3'-arm in the TARGATT™ CHO-K1 master cell line. PCR analysis shows the expected sizes for the 5' arm and 3' arm junction PCR products on a 1.5% agarose gel: 662 bp and 915 bp, respectively.



Figures 3. Flow cytometric analysis of mCherry expression level in CHO-K1 cells. A donor plasmid containing the fluorescent marker mCherry was used to analyze integration efficiency. An integration efficiency of ~18% without drug selection (right) and a negative control integration efficiency of ~1.60% (left) were obtained.

References

- Chi X, Zheng Q, Jiang R, Chen-Tsai RY, Kong LJ. A system for site-specific integration of transgenes in mammalian cells. PLOS ONE. 2019;14(7):e0219842.
- Zhu F, Gamboa M, Farruggio AP, et al. DICE, an efficient system for iterative genomic editing in human pluripotent stem cells. Nucleic Acids Research. 2014;42(5):e34.

Licensing

TARGATT™ kits are designed to enable evaluation of the technology prior to purchasing a commercial license. Academic researchers may purchase TARGATT™ technology without licensing. Contact Applied StemCell to discuss commercial licensing terms.

Related Services

If you prefer to outsource, Applied StemCell offers custom genome engineering, iPSC gene editing and differentiation, cGMP cell banking and manufacturing, and process, analytical, quality, and regulatory support. Contact us for a custom service project quote.

Kit Components

Catalog No.	Component	Format	Quantity
AST-1408-1	TARGATT™ CHO-K1 (H11) Master Cell Line	Cells	1 × 10 ⁶ cells/vial
AST-3081	TARGATT™ 41 attB-mCherry-P2A-LacZ (library) Cloning Plasmid	Plasmid	15 µg
AST-3203	TARGATT™ CAG Integrase Plasmid	Plasmid	60 µg
AST-3065	TARGATT™ 25 Positive Control Plasmid	Plasmid	15 µg

Additional kit components are available for purchase by customers who have purchased the kit. Contact Applied StemCell for details.

Ordering Information

Catalog No.	AST-1409
Description	TARGATT™ CHO-K1 Knock-in Kit (H11), Antibody Library Screening – FACS
Format	kit
Pack Size	1 kit

Related Products

- AST-1420 – TARGATT™ CHO-K1 Knock-in Kit (H11); General purpose, H11 site
- AST-1405 – TARGATT™ CHO Knock-in Kit (A2, General purpose, A2 site)
- AST-1410 – TARGATT™ CHO-K1 Knock-in Kit (H11), Antibody Library Screening; Drug selection
- Contact Applied StemCell for compatible media and related cell models.

Contact & Ordering

 appliedstemcell.com
 info@appliedstemcell.com
 +1 866.497.4180

Ready to accelerate your genome engineering project?

Scan the QR code or visit our website to explore product details, access technical resources, discover related TARGATT™ solutions, and request a consultation with our scientific team.

