

CUTANA™ Tn5 Transposome

Catalog No	15-1036-625uL	Species	<i>E. coli</i>
Lot No	26174001-51	Source	<i>E. coli</i>
Pack Size	625 µL	Epitope Tag	None
Concentration	2 U/µL	MW	139 kDa

DESCRIPTION

CUTANA™ Tn5 Transposome for ATAC-seq is a highly active *E. coli* Tn5 transposase mutant, pre-charged with mosaic-end adapters and supplied ready for chromatin accessibility profiling by Assay for Transposase-Accessible Chromatin using sequencing (ATAC-seq). ATAC-seq was first described by Buenrostro et al. as a rapid method for mapping accessible chromatin by direct *in vitro* transposition of sequencing adapters into native chromatin [1]. The assay enables genome-wide analysis of open chromatin and regulatory element activity from low nuclei inputs.

The CUTANA™ Tn5 Transposome is compatible with workflows based on the Omni-ATAC protocol described by Corces et al. and detailed by Grandi et al., which improved ATAC-seq performance by reducing background and increasing signal-to-background across a broad range of sample types [2,3].

Key features

- Pre-charged Tn5 Transposome supplied ready for ATAC-seq tagmentation
- Compatible with the Omni-ATAC protocol
- Recommended for chromatin accessibility profiling from isolated nuclei
- Lot-validated with fresh nuclei

For a streamlined experience with validated reagents, see the CUTANA™ ATAC-seq Kit (EpiCypher 14-1121). For full end-to-end support, see CUTANA™ ATAC-seq Services.

RECOMMENDED ACCESSORY REAGENTS

Item	Cat No	Item	Cat No
8-strip tubes	10-0009	CUTANA™ CDI Primers	14-1190
Magnetic Separation Rack, 0.2 mL	10-0008	Non-Hot Start 2X PCR Master Mix	15-1018
Magnetic Separation Rack, 1.5 mL	10-0012	5% Digitonin	21-1004
DNA Purification Beads	21-1407		

TECHNICAL INFORMATION

Storage	Stable for six months at -80°C from date of receipt. Avoid more than 10 freeze/thaw cycles.
Formulation	50 mM HEPES-KOH pH 7.2, 100 mM NaCl, 0.1 mM EDTA, 1 mM DTT, 0.1% Triton X-100, 50% glycerol.
Adapters	Tn5ME-A: 5'-TCGTCCGGCAGCGTCAGATGTGTATAAGAGACAG-3' Tn5ME-B: 5'-GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAG-3' Tn5ME-rev: 5'-[phos]CTGTCTCTTATACACATCT-3'

APPLICATION NOTES

CUTANA™ Tn5 Transposome for ATAC-seq is compatible with the Omni-ATAC protocol described by Corces et al. and detailed by Grandi et al. [2,3]. For recommended reaction conditions, users should refer to the Omni-ATAC publications and associated protocol.

15-1036-625uL contains sufficient Tn5 Transposome for 250 standard ATAC-seq reactions*

*5 Units of CUTANA™ Tn5 Transposome, equivalent to 2.5 µL, is sufficient to optimally tagment 1,000–50,000 K562 nuclei at 37°C for 30 minutes in a 50 µL reaction. Because chromatin accessibility, nuclear integrity, and tagmentation efficiency can vary by cell type and sample preparation method, users may need to titrate CUTANA™ Tn5 Transposome to determine the optimal amount of enzyme for their cell type or sample of interest. See the EpiCypher Tech Support Center for guidance on optimizing tagmentation.

REFERENCES

- [1] Buenrostro et al. *Nature Methods* (2013). PMID: 24097267
- [2] Corces et al. *Nature Methods* (2017). PMID: 28846090
- [3] Grandi et al. *Nature Protocols* (2022). PMID: 35478247

CERTIFICATE OF ANALYSIS

Quality Control Metrics

Protein Purity (SDS-PAGE)

Tn5 is >90% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

Result

Pass

Functional Testing (ATAC-seq)

Each lot of CUTANA™ Tn5 Transposome is functionally validated by comparison to a previous lot and to established EpiCypher internal controls. ATAC-seq is performed on 50k native K562 nuclei using the CUTANA™ Tn5 Transposome. Libraries are sequenced on an Illumina NextSeq2000 with paired-end sequencing (2x50 bp). Assessment is based on metrics including library yields and fragment size distribution, percent unique reads, percent mitochondrial reads, percent *E. coli* reads, fraction of reads in peaks (FRiP), insert size distribution, and TSS enrichment score.

Pass

PUBLISH DATE

9/15/2026

APPROVED BY



ANDREA JOHNSTONE, PHD

SENIOR DIRECTOR OF PRODUCT MANAGEMENT

This product ("Product") is warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications, and/or accompanying package inserts ("Documentation") and to be free from defects in material and workmanship. Unless otherwise expressly authorized in writing, Products are supplied for research use only. No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper, and intended usage. This warranty does not extend to anyone other than the original purchase of the Product ("Buyer"). No other warranties, express or implied, are granted, including without limitation, implied warranties of merchantability, fitness for any particular purpose, or non infringement. Buyer's exclusive remedy for non-conforming Products during the warranty period is limited to replacement of or refund for the non-conforming Product(s). There is no obligation to replace Products as the result of (i) accident, disaster or event of force majeure, (ii) misuse, fault or negligence of or by Buyer, (iii) use of the Products in a manner for which they were not designed, or (iv) improper storage and handling of the Products.