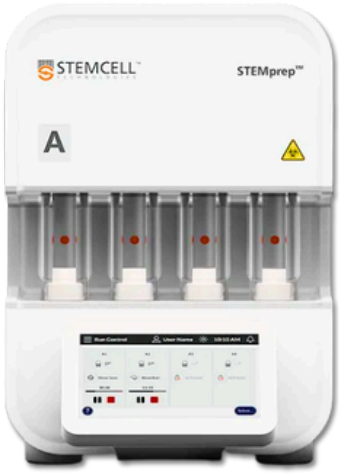
BIO BITS

For Private Circulation Only

Automated Tissue Dissociation for High-Quality Single-Cell Suspensions

The STEMprep™ Tissue Dissociator is an automated, modular tissue processing system designed to generate high-yield, high-viability single-cell suspensions from a wide range of solid tissues. It standardizes tissue dissociation workflows, minimizes user variability, and preserves cell functionality and epitope integrity for reliable downstream analysis



✓ Automated & Reproducible
Standardizes tissue dissociation and reduces user-to-user variability.

✓ High Cell Yield & Viability
Maintains cell integrity for downstream applications

✓ Temperature Control
Integrated heating and cooling from 4°C to 37°C.

✓ Flexible Throughput
Supports 4, 8, or 12-sample configurations.

✓ Customizable Protocols
Use validated protocols or create tissue-specific workflows.

Human iPSC-Derived Hepatic Organoids

- ✓ Ready-to-use cryopreserved 3D hepatic organoids
- ✓ Derived from well-characterized healthy human iPSC lines
- ✓ High post-thaw recovery and expansion
- ✓ Express mature hepatocyte markers and liver-specific functions
- ✓ Supports scalable and reproducible liver research workflows

STEMmatrix™ Spike-In

- ✓ Pre-coating-free matrix for hPSC culture
- ✓ Eliminates plate coating and pre-incubation steps
- ✓ Ready to use; store at 4°C
- ✓ Defined recombinant protein matrix for consistent results
- ✓ Compatible with TeSR™ media and feeder-free culture systems
- ✓ Reduces hands-on time and simplifies workflows

CloneR™3

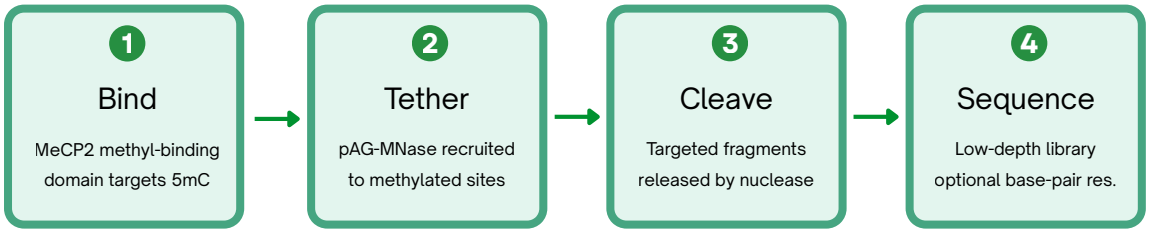
- ✓ Chemically defined, animal-origin-free supplement
- ✓ Enhances cloning efficiency and single-cell survival
- ✓ Improves post-thaw and post-electroporation recovery
- ✓ Increases cell yields in 3D suspension cultures
- ✓ Optimized for TeSR™-AOF workflows
- ✓ Concentrated 1000X formulation minimizes media dilution

Beyond bisulfite: a better way to map DNA methylation

EpiCypher's CUTANA meCUT&RUN delivers comparable resolution to whole-genome bisulfite sequencing — at >20× lower sequencing depth, no DNA degradation, and ultra-low cell input.

DNA methylation at cytosine residues (5mC) drives gene silencing, imprinting, and cell identity — yet whole-genome bisulfite sequencing (WGBS), still the default method in many labs, carries real drawbacks: harsh chemical conversion degrades DNA, sequencing depth requirements are enormous, and high cell-input demands make rare-sample work impractical. EpiCypher's CUTANA platform tackles all three, built on the same CUT&RUN nuclease strategy that has already displaced ChIP-seq in many workflows.

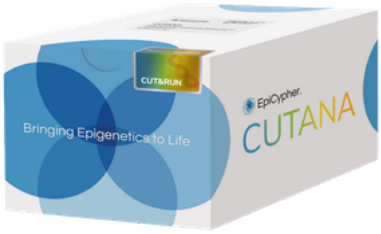
How meCUT&RUN works

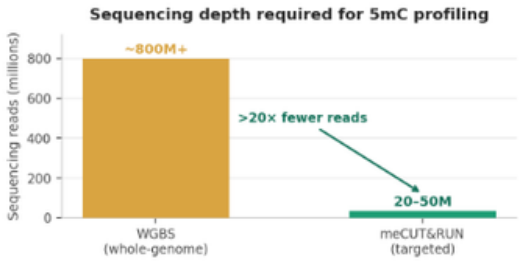


HEAD-TO-HEAD COMPARISON

WGBS Legacy	meCUT&RUN Best Choice	Multiomic CUT&RUN Best Choice
• 30-60 x sequencing depth • Biscuitfite DNA degradation • High cell input • Expensive per sample	• >20 x less sequencing • No biscuitfite conversion • Low-input compatible • Base-pair resolution	• 5mC + histone marks • Single assay readout • Replaces 2-3 assays • Drug discovery-ready

The core innovation is a GST-tagged MeCP2 methyl-binding domain that selectively enriches methylated DNA, paired with an immunotethered pAG-MNase that cleaves and releases targeted fragments. This avoids bisulfite-induced degradation entirely — preserving DNA quality and enabling profiling from low-input or clinically scarce material such as FFPE tissue. Two library options provide flexibility: conventional prep for ~150 bp enrichment profiles, or cytosine-conversion prep for single-base resolution.





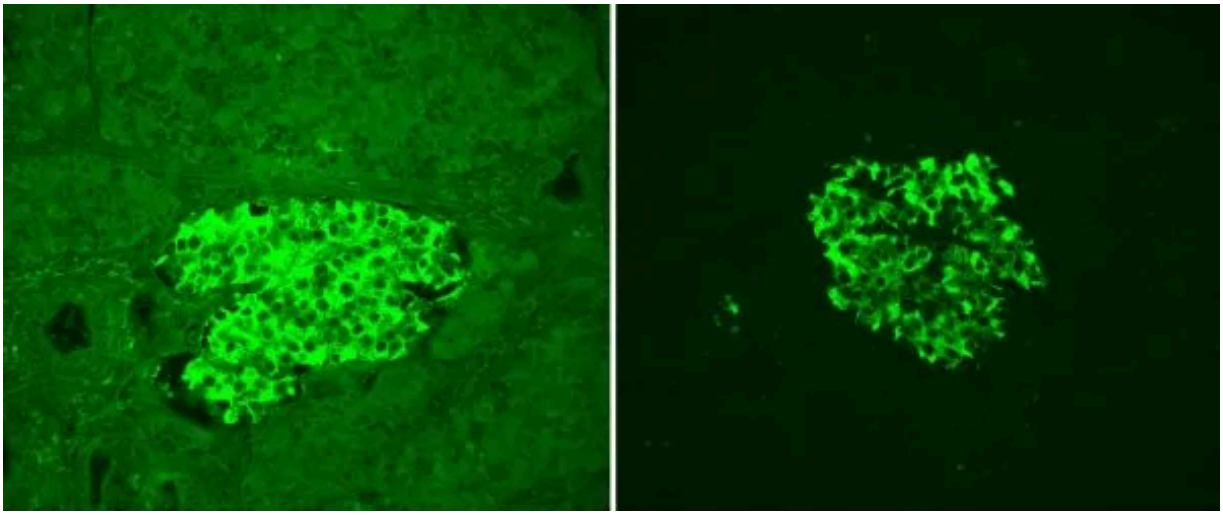
"Highly sensitive, scalable tools to reveal and decode complex mechanisms for gene regulation." — Dr. M-C. Keogh, CSO, EpiCypher

Reduce background noise using vector® TrueVIEW® Auto fluorescence Quenching Kit

The TrueVIEW Autofluorescence Quenching Kit provides a novel way to diminish unwanted autofluorescence from non-lipofuscin sources and dramatically improve signal-to-noise ratio. TrueVIEW removes unwanted autofluorescence in tissue sections due to aldehyde fixation, the presence of red blood cells, and structural elements such as collagen and elastin. The quenching action of the kit reagents provides a clear, unambiguous, “true view” localization of the target antigen.

Without treatment

With TrueView™ Quencher



Adjacent sections of Human Pancreas FFPE tissue stained for insulin using fluorescein label (green) and mounted with VECTASHIELD vibrance Antifade Mounting Medium. Note significant reduction of autofluorescence in treated section (right).

Advantages Unleased

- Effectivity with problematic tissues such as kidney and spleen
- Reduces background while retaining the fluorescence of the specific target antigen
- Improves overall signal to noise ratio
- An easy-to-use, one-step method Compatibility with a wide selection of fluorophores
- Compatibility with standard epifluorescence and confocal laser microscopes
- Availability with DAPI and without DAPI

The Vector® TrueVIEW® Autofluorescence Quenching Kit is broadly applicable for most tissue based IF assays.

Revolutionizing Identification of bacteria, yeasts, and fungi in minutes using advanced MALDI-TOF Mass Spectrometry

Bruker MALDI Biotyper® sirius one

Key Benefits:

- Species-level identification
- Results within minutes
- Minimal sample preparation
- Low consumable costs
- High-throughput workflow
- 21 CFR Part 11 support

Applications

- Environmental Monitoring
- Water System Monitoring
- Contamination Investigation
- Fermentation Monitoring
- Cell Bank Verification

Simple 4-Step Workflow

Colony Selection → Matrix Addition → Spectrum Generation → Identification

Our Product Portfolio

- Biochemistry Analyser
- Biomass Monitor
- Cell Culture Media
- ECIS Systems
- Lyophilizer
- Micro / Nano CT
- Microscopes
- Bioreactor/Shaker
- Centrifuges
- Electroporators / Electrocellfusion
- IF & IHC Reagents
- Purification Resins & Columns
- Tissue Homogenizers
- Automated, Manual & AI-Powered Colony Counter
- Cell Isolation Kits & Supplements
- Gene Edited Reference Standard & Cell Lines
- Cross Linkers & Conjugation Kits For Protein & Oligonucleotide Labeling
- O2K Products - Mitochondria & Cell Research
- Primary & Secondary Antibodies
- Special Trays, Membranes & Bags For Freeze Dryer

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