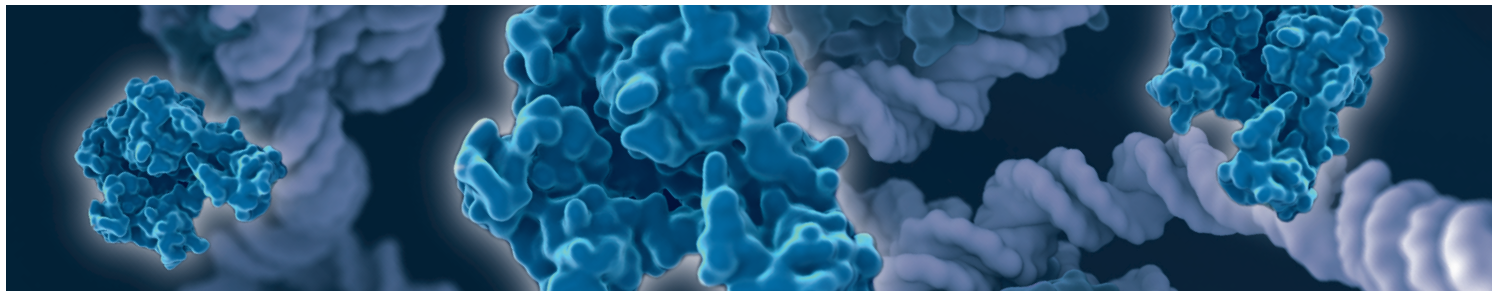


CUT&Tag Just Got More Reliable with *Drosophila* Spike-in Controls



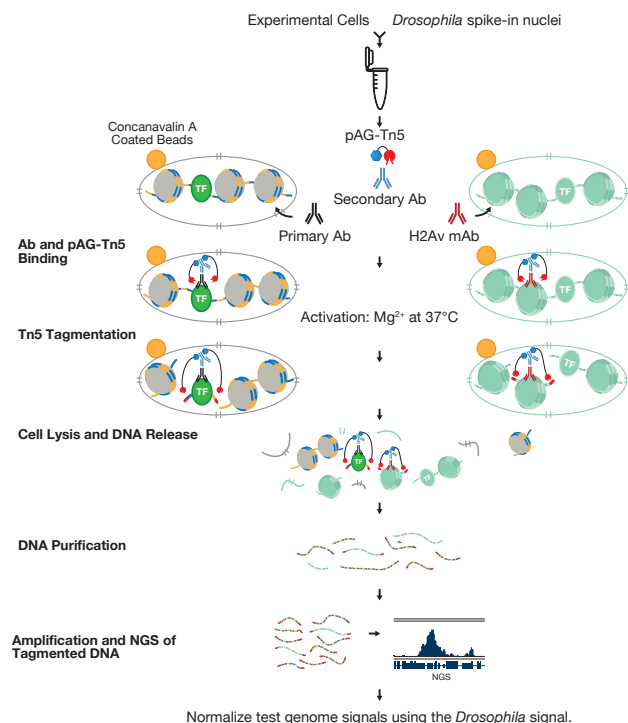
CUT&Tag with Normalization

The Cleavage Under Targets & Tagmentation (CUT&Tag) is a faster, more cost-friendly alternative to ChIP-seq that utilizes a primary antibody, secondary antibody and pAG-Tn5 to identify protein-DNA interactions across the genome.

Cell Signaling Technology (CST) has expanded our CUT&Tag portfolio to include **two NEW! CUT&Tag *Drosophila* spike-in normalization control kits** to account for any technical variability that might occur during your assay—from cell handling through sequencing.

Streamlined DNA Library Prep

CUT&Tag cuts out the *in vitro* adaptor ligation step, allowing you to move directly to PCR amplification of your library, making it 25% faster than CUT&RUN. You can also choose to add a *Drosophila* spike-in normalization control to ensure your data reflects relevant biological changes.



Enjoy the Benefits of CUT&Tag

Faster time to results	1-2 days from cells to DNA library. CUT&Tag is 25% quicker than CUT&RUN due to streamlined library prep
Low sample requirement	~40x less sample than ChIP-Seq
Low sequencing depth = sequencing cost savings	Only ~2 million high-quality reads are required due to low background
<i>In vivo</i> method	Assays are performed using native chromatin, eliminating cross-linking artifacts

When to Use CUT&Tag vs CUT&RUN

Both CUT&Tag and CUT&RUN help you unravel protein-DNA interactions when you are short on time and/or sample. Use the table below to figure out which method is the right one for you.

	CUT&Tag	CUT&RUN
Compatible with Histones	✓	✓
Compatible with Transcription Factors	Depends	✓
Compatible with Cofactors	Depends	✓
Compatible with <i>Drosophila</i> Spike-in Controls	✓	✓
Compatible with Yeast Spike-in Controls	X	✓
Compatible with qPCR	X	✓
Compatible with NG-seq	✓	✓
DNA Library Prep	<i>In vivo</i>	<i>In vitro</i>
Cells to DNA Library	1-2 days	2-3 days
Low Cell	✓	✓
Single Cell Amenable	✓	X
Sequencing Depth	2 M	3-5 M



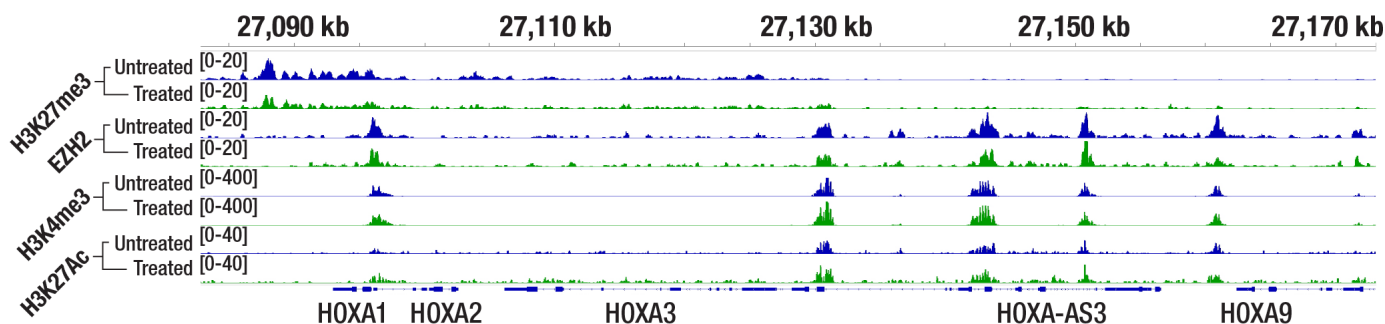
Learn more at:
<https://cst-science.com/s0qveg>



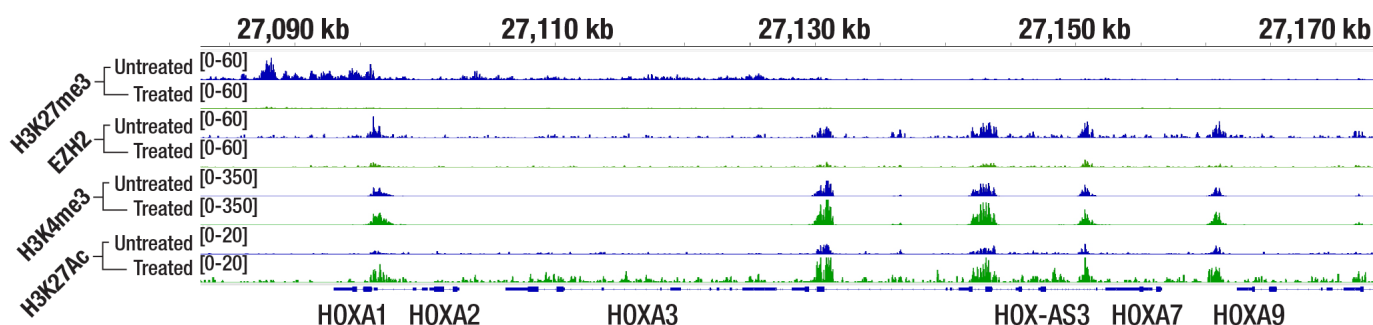
Use CST® Normalization Controls to Increase Confidence in CUT&Tag Data

CST CUT&Tag kits, reagents, and controls are validated together with the same rigor applied to all of our products to ensure performance. You'll get the reliability required to generate data you can trust every time.

Before Normalization



After Normalization



CUT&Tag was performed with 100,000 MCF7 cells, with or without treatment of 1 μ M Tazemetostat for 6 d (as indicated), and either Tri-Methyl-Histone H3 (Lys27) (C36B11) Rabbit Monoclonal Antibody #9733, Ezh2 (D2C9) Rabbit Monoclonal Antibody #5246, Tri-Methyl-Histone H3 (Lys4) (C42D8) Rabbit Monoclonal Antibody #9751, or Acetyl-Histone H3 (Lys27) (D5E4) Rabbit Monoclonal Antibody #8173, using CUT&Tag Assay Kit #77552 and the *Drosophila* Spike-In Control Kit for CUT&Tag (Rabbit). DNA libraries were prepared using CUT&Tag Dual Index Primers and PCR Master Mix for Illumina Systems #47415. The figure shows binding across the HOXA gene cluster. After normalization, both H3K27me3 and EZH2 signal is significantly reduced following EZH2 inhibitor treatment, consistent with decreased H3K27me3 levels. In contrast, both H3K4me3 and H3K27Ac signals remain comparable, or are slightly increased, as this drug does not directly affect these marks. Instead, reduced H3K27me3 occupancy may permit increased H3K4me3 or H3K27Ac binding at the same loci.

CUT&Tag Products

Scan here for a complete listing of CUT&Tag products:



Products

#77552	CUT&Tag Assay Kit
#29811	<i>Drosophila</i> Spike-In Control Kit for CUT&Tag (Rabbit)
#19629	<i>Drosophila</i> Spike-In Control Kit for CUT&Tag (Mouse)
#79561	CUT&Tag pAG-Tn5 (Loaded)
#47415	CUT&Tag Dual Index Primers and PCR Master Mix for Illumina Systems

Products

#63228	CUT&Tag PCR Master Mix
#35401	Goat Anti-Rabbit IgG (H&L) Antibody
#52885	Donkey Anti-Mouse IgG (H&L) Antibody
#2729	Normal Rabbit IgG
#68660	Normal Mouse IgG

U.S. Patent No. 11,733,248, foreign equivalents, and child patents deriving therefrom.
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U.S. Patent No. 7,429,487, foreign equivalents, and child patents deriving therefrom.



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