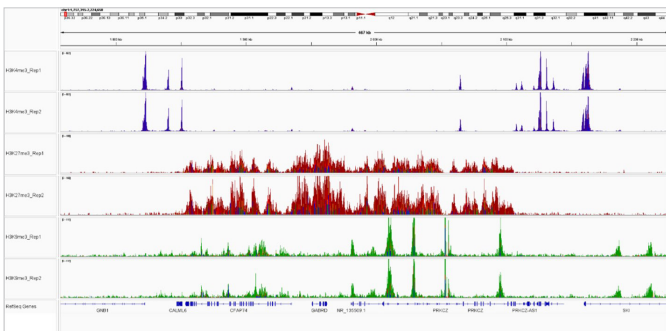


CUT&Tag-sequencing (Cleavage Under Targets and Tagmentation) is a new, alternative method to ChIP-seq that combines antibody-targeted controlled cleavage with massively parallel DNA sequencing to identify the binding sites of DNA-associated proteins. At Diagenode, we offer a number of solutions for CUT&Tag assays including a stand-alone fusion protein (pA-Tn5 transposase), validated antibodies, and a complete kit for CUT&Tag.

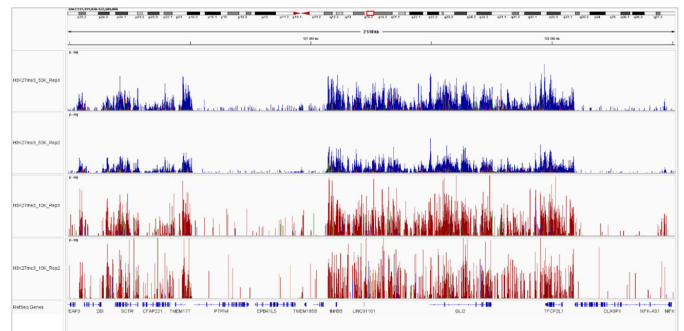
iDeal CUT&Tag Kit for Histones

- Rapid and easy chromatin profiling assay for **histones marks** and some **transcription factors**
- No chromatin preparation needed
- **Low cell number**: 10,000 for histones; 50,000 for transcription factors
- **Accurate amplification** due to intermediate quantification step
- Monitoring of **assay efficiency** by qPCR
- **Accurate sequencing data** – with unique dual indexes for mitigating index hopping
- Lower sequencing depth

High-quality and low-background profiling of histone modifications

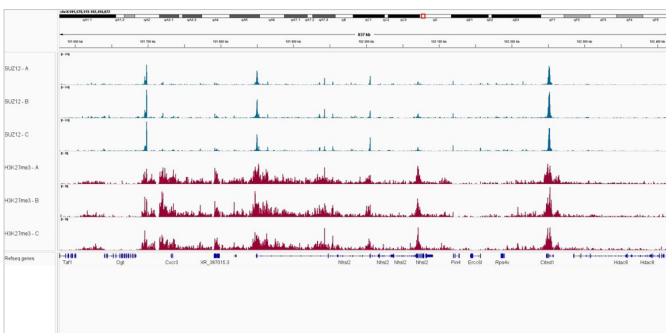


Validated on different histone marks: H3K4me3 (blue), H3K27me3 (red), H3K9me3 (green).

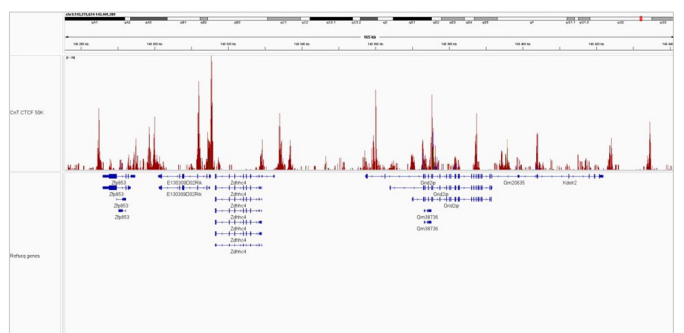


Reliable results for low input: 50,000 (blue) or 10,000 (red) K562 cells and H3K27me3 antibody.

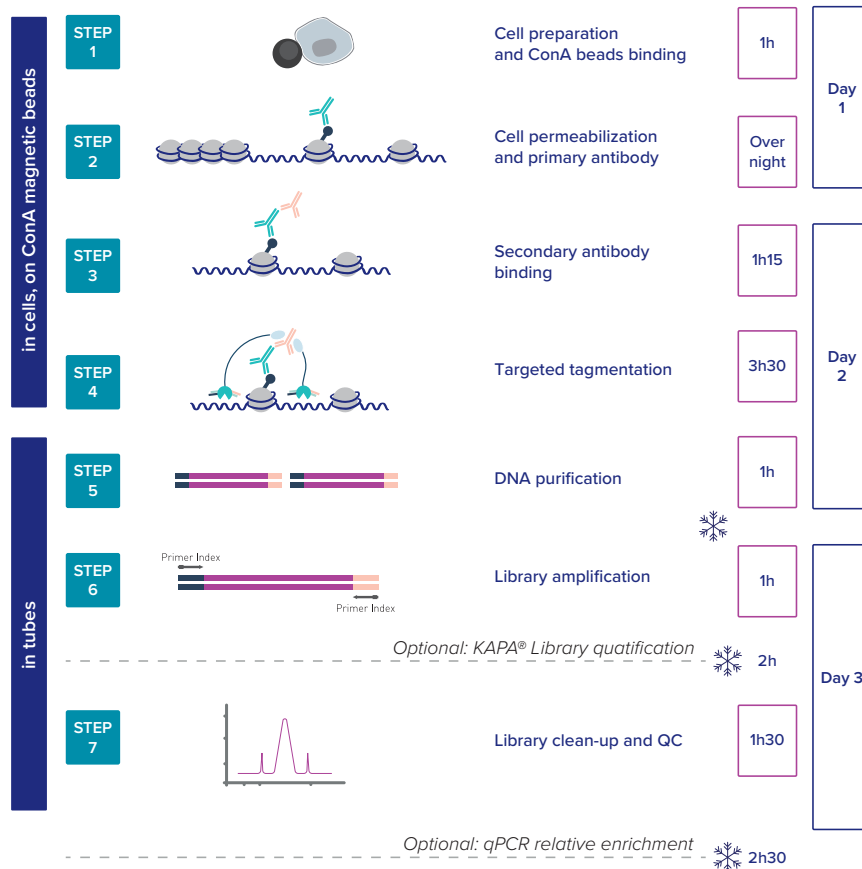
Transcription factors — successful chromatin profiling using only 50,000 cells



Cut&Tag results for A) SUZ12 and H3K27me3 (overlap between the signal from both proteins, as part of the Polycomb Repressive Complex), B) CTCF.



How it works



The iDeal CUT&Tag protocol involves binding cells to solid-phase ConA magnetic beads, allowing magnetic handling of the cells for the major steps of the protocol. Bead-bound cells are permeabilized, incubated with primary antibody against a target of interest and then incubated with a secondary antibody. Diagenode's protein pA-Tn5 Transposase - loaded is then bound to the complex. Protein A guides Tn5 transposase on chromatin to the antibody attached to its target. Tn5 transposase is activated by Mg^{+2} ions to insert the sequencing adaptors into genomic regions of interest. DNA is then purified and the tagged genomic regions of interest are amplified by PCR using Diagenode's Primer Indexes for tagmented libraries.

Products for CUT&Tag

- iDeal CUT&Tag kit for Histones, Cat. No. C01070020, C01070021
- Antibody package for CUT&Tag (anti-rabbit), Cat. No. C01070022
- Antibody package for CUT&Tag (anti-mouse), Cat. No. C01070023
- Fusion protein pA-Tn5 Transposase (loaded), Cat. No. C01070001 and pA-Tn5 Transposase (unloaded), Cat. No. C01070002
- CUT&Tag grade antibodies
- Primer indexes for tagmented libraries, Cat. No. C01011034, C01011036, C01011037



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EU // Liège Science Park / Rue Bois Saint-Jean 3, 4102 Seraing / BE / Phone : +32 4 364 20 50 / Fax : +32 4 364 20 51

US // 400 Morris Avenue / Suite 101 Denville / NJ 07834 / USA / Phone : +1 862 209 4680 / Fax : +1 862 209 4681

www.diagenode.com