

CHD1 CUTANA™ CUT&RUN Antibody



EpiCypher®

Catalog No. 13-2008

Lot No. 21013001-42

Pack Size 100 µL

Type Polyclonal **Target Size** 197 kDa

Host Rabbit **Format** Aff. Pur. IgG

Reactivity Human

Applications CUT&RUN, IP

Product Description:

This antibody meets EpiCypher's "CUTANA Compatible" criteria for performance in Cleavage Under Targets and Release Using Nuclease (CUT&RUN) and/or Cleavage Under Targets and Tagmentation (CUT&Tag) approaches to genomic mapping. Every lot of a CUTANA Compatible antibody is tested in the indicated CUTANA approach using EpiCypher optimized protocols (EpiCypher.com/resources/protocols) and determined to yield peaks that show a genomic distribution pattern consistent with reported function(s) of the target protein. CHD1 antibody produces CUT&RUN peaks above background (**Figure 1**) that overlap with H3K4me3 (**Figures 1-2**), consistent with CHD1 tandem chromodomains that mediate H3K4me3 binding and SWI/SNF complex nucleosome remodeling (1).

Immunogen:

A synthetic peptide corresponding to human CHD1 amino acids 1500 to 1550.

Formulation:

Antigen affinity-purified antibody (1.0 mg/mL) in Tris-citrate/phosphate buffer pH 7 to 8, 0.09% sodium azide.

Storage and Stability:

Stable for 1 year at 4°C from date of receipt.

Application Notes:

Recommended Dilutions:

CUT&RUN: 0.5 µg

IP: 2 - 5 µg/mg lysate

References:

1. Flanagan et al (2005) *Nature* 7071:1181-5.

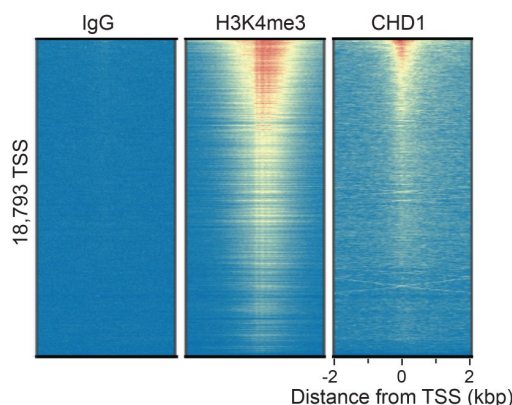


Figure 1: CHD1 enrichment at annotated transcription start sites (TSSs) in CUT&RUN. CUT&RUN was performed using 500,000 K562 cells with CHD1 and control antibodies (0.5 µg each; IgG negative control, EpiCypher 13-0042; H3K4me3 positive control, EpiCypher 13-0041). Sequencing reads were aligned to annotated TSSs (+/- 2 kbp) of 18,793 genes. High, medium, and low signal is ranked by intensity (top to bottom) and reflected by red, yellow, and blue colors, respectively. Rows aligned relative to CHD1 antibody.

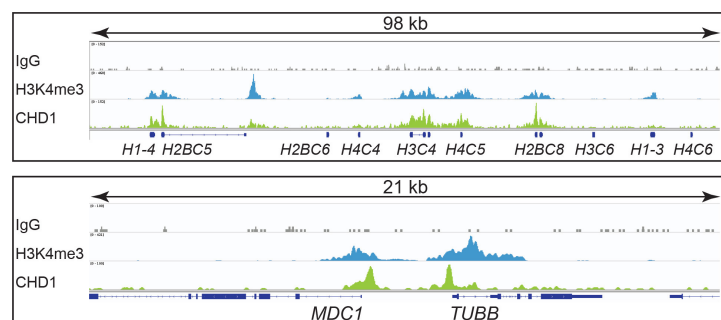


Figure 2: CHD1 CUT&RUN peaks and functional overlap. Two representative gene loci from the CUT&RUN data in Figure 1 are shown. CHD1 peaks overlap with H3K4me3 CUT&RUN peaks (EpiCypher 13-0041), consistent with the CHD1 double chromodomain recognition of this PTM (1). Images were generated using the Integrative Genomics Viewer (Broad Institute).

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Applications Key: ChIP: Chromatin immunoprecipitation; CUT&RUN: Cleavage Under Targets and Release Using Nuclease; CUT&Tag: Cleavage Under Targets and Tagmentation; E: ELISA; FACS: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence; IHC: Immunohistochemistry; IP: Immunoprecipitation; L: Luminex; WB: Western Blot. **Reactivity Key:** B: Bovine; Ce: *C. elegans*; Ch: Chicken; Dm: *Drosophila*; Eu: Eukaryote; H: Human; M: Mouse; Ma: Mammal; R: Rat; Sc: *S. cerevisiae*; Sp: *S. pombe*; WR: Wide Range (predicted); X: Xenopus; Z: Zebrafish

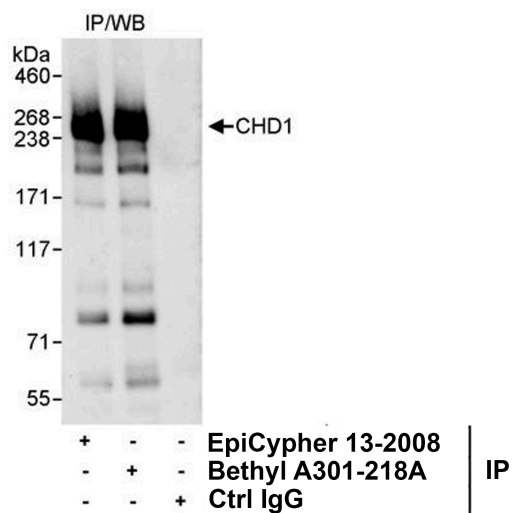


Figure 3: Immunoprecipitation of human CHD1. EpiCypher CHD1 antibody (3 μ g) was used to immunoprecipitate whole cell lysates isolated from HeLa cells using NETN lysis buffer (1.0 mg per IP). A negative control IgG antibody and positive control antibody to a different CHD1 epitope (Bethyl Laboratories) were also used to demonstrate specificity of the IP. Immunoprecipitates were loaded onto 4-8% SDS-PAGE gel (20% of IP loaded) and probed via western blot with Bethyl A301-218A antibody (1.0 μ g/mL).

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