CHD3 CUTANA™ CUT&RUN Antibody

Catalog No. 13-2009
Lot No. 21013001-43
Pack Size 100 µL

Type Polyclonal
Target Size 227 kDa
Reactivity Human, Mouse
Host Rabbit
Format Aff. Pur. IgG
Applications CUT&RUN, IP, IHC

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. CHD3 is an understudied member of the nucleosome remodeling and deacetylase (NuRD) complex. CHD3 antibody produces CUT&RUN peaks above background (**Figure 1**) within gene promoters, intergenic regions, and introns (**Figures 1-2**).

Immunogen:

A synthetic peptide corresponding to human CHD3 amino acids 1950 to 2000.

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
IHC: 1:500 - 1:2,000*

**Epitope retrieval with citrate buffer pH 6.0 recommended for FFPE tissue*

References:

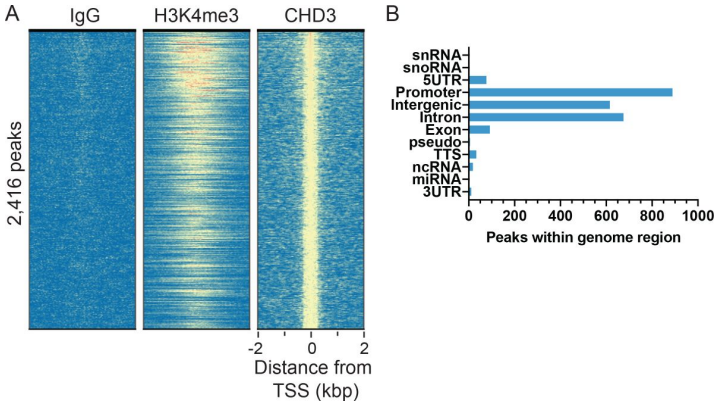

Figure 1: CHD3 genome-wide enrichment in CUT&RUN. CUT&RUN was performed using 500,000 K562 cells with 0.5 µg CHD3 antibody. (**A**) Heatmap of CHD3 peaks (MACS2) relative to IgG and H3K4me3 antibodies (0.5 µg; EpiCypher 13-0042 and 13-0041, respectively). Aligned rows are ranked by CHD3 peak intensity (top to bottom) and colored such that red indicates high enrichment and blue denotes background. (**B**) The number of CHD3 peaks falling within the indicated genomic features is plotted.

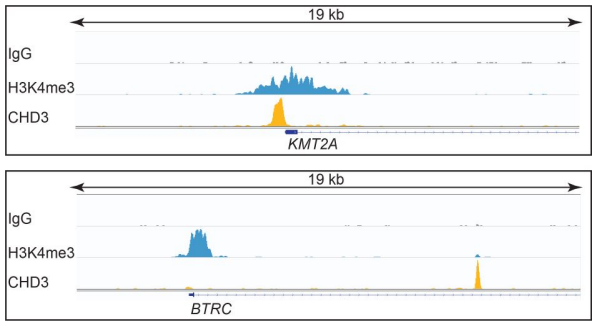

Figure 2: Representative CHD3 CUT&RUN peaks. Two gene loci showing CHD3 peaks at a gene promoter (top) and an intronic region (bottom) are representative of the functional annotation analysis of CHD3 peak localization in CUT&RUN (Figure 1). Images were generated using the Integrative Genomics Viewer (Broad Institute).

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.cerevesiae*; Sp: *S. pombe*; WR: Wide Range (predicted); X: Xenopus; Z: Zebrafish

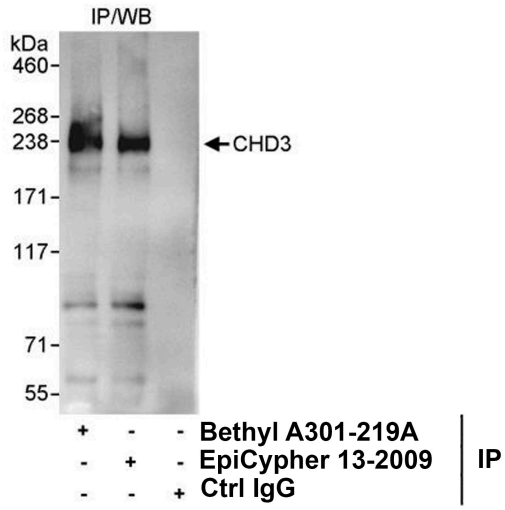

Figure 3: Immunoprecipitation of human CHD3. EpiCypher CHD3 antibody (3 µg) was used to immunoprecipitate whole cell lysates isolated from HeLa cells using NETN lysis buffer (1.0 mg per IP). A negative control IgG antibody and positive control antibody to a different CHD3 epitope (Bethyl Laboratories) 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 A301-219A antibody (1.0 µg/mL).

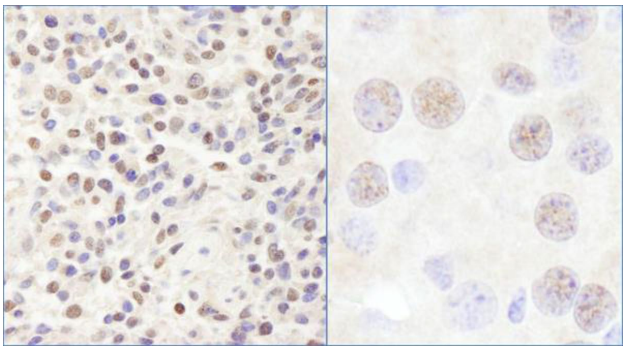

Figure 4: Immunohistochemistry detection of human and mouse CHD3. FFPE section of human Ewing sarcoma (left) and mouse renal cell carcinoma (right) examined using CHD3 antibody (1:1,000 dilution, 1 µg/mL).

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