BRM/SMARCA2 CUTANA™ CUT&RUN Antibody

Catalog No. 13-2006
Lot No. 21013001-40
Pack Size 100 µL

Type Polyclonal **Target Size** 181 kDa **Reactivity** Human
Host Rabbit **Format** Aff. Pur. IgG **Applications** CUT&RUN, WB, 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. BRM antibody produces CUT&RUN peaks above background (**Figure 1**) localized to gene transcription start sites (**Figures 1-2**), consistent with its known role as the ATP-dependent helicase subunit of the SWI/SNF chromatin remodeler complex (1).

Immunogen:

A synthetic peptide corresponding to human BRM amino acids 1 to 50.

Formulation:

Antigen affinity-purified antibody (200 µg/mL) in Tris-buffered saline with 0.1% BSA and 0.09% sodium azide.

Storage and Stability:

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

Application Notes:

Recommended Dilutions:

CUT&RUN: 0.1 - 0.5 µg
WB: 1:2,000 - 1:10,000
IP: 2 - 5 µg/mg lysate

References:

1. Raab et al (2017) *Epigenetics Chromatin* 10:62.

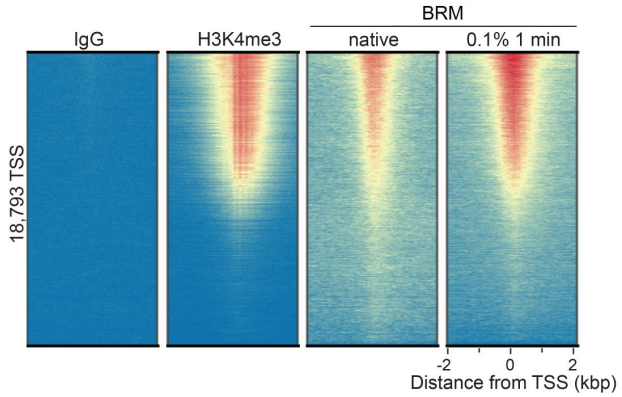

Figure 1: BRM enrichment at annotated transcription start sites (TSSs) in CUT&RUN. CUT&RUN was performed using 500,000 K562 cells with BRM (0.1 µg) and control antibodies (0.5 µg; IgG, EpiCypher 13-0042; H3K4me3, EpiCypher 13-0041). Sequencing reads were aligned to TSSs (+/- 2 kbp) of 18,793 genes. Signal (red) over background (blue) is ranked by intensity (top to bottom). All rows aligned to BRM antibody with moderate fixation (0.1% formaldehyde, 1 min), which improved signal vs. native conditions.

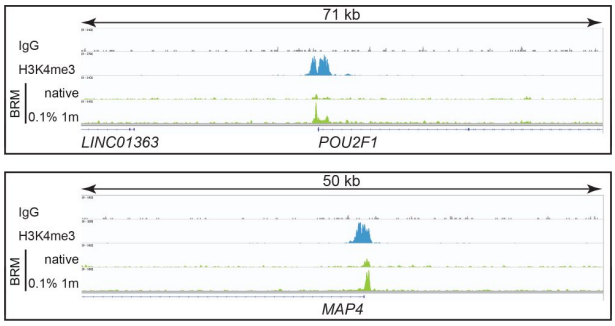

Figure 2: BRM CUT&RUN peaks and functional overlap. Two representative gene loci from the CUT&RUN data in Figure 1 are shown. BRM enrichment overlaps with H3K4me3 peaks, consistent with the reported function of BRM as a member of the SWI/SNF chromatin remodeler complex (1). Improved signal recovery with moderate fixation (0.1% formaldehyde, 1 min), is notable. Images generated in 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

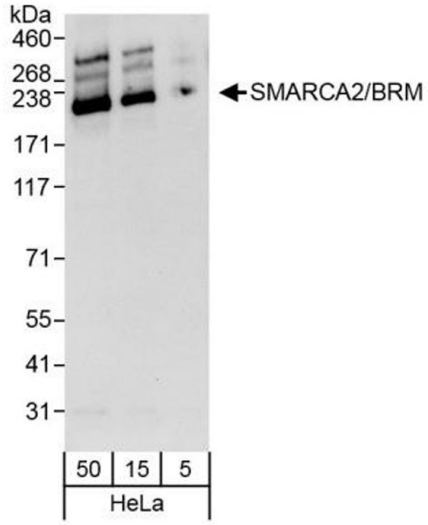

Figure 3: Western blot detection of human BRM. Whole cell lysates were isolated from HeLa cells using NETN lysis buffer. The indicated amounts (µg) of lysate were loaded onto 4-8% SDS-PAGE gel and analyzed under standard western blot conditions using BRM antibody (0.04 µg/mL).

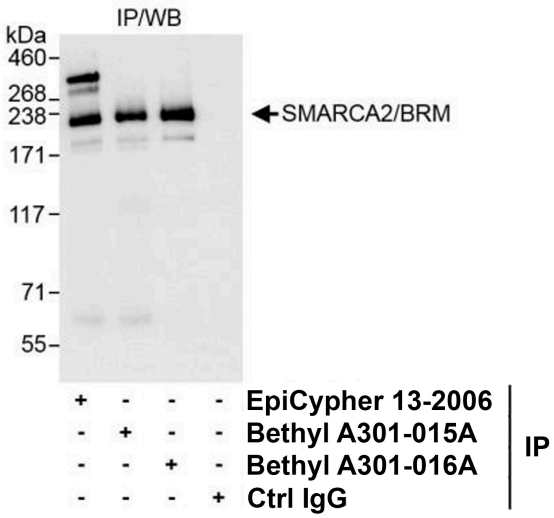

Figure 4: Immunoprecipitation of human BRM. EpiCypher BRM antibody (3 µg) was used to immunoprecipitate whole cell lysates isolated from HeLa cells using NETN lysis buffer (1 mg per IP). A negative control IgG antibody and positive control antibodies to various BRM epitopes (Bethyl Laboratories) were 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 EpiCypher BRM antibody (1.0 µg/mL).

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