FOXA1/HNF3A Antibody: CUTANA™ Compatible (CUT&RUN)

Catalog No. 13-2001
Lot No. 20240001-17
Pack Size 100 µL

EpiCypher®
www.epicypher.com

Type Polyclonal
Host Rabbit
Target Size 49 kDa
Format Aff. Pur. IgG
Reactivity H, M (predicted: rat)
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. FOXA1 antibody produces CUT&RUN peaks above background primarily in intronic, intergenic, and promoter regions (**Figure 1**) that overlap with known FOXA1 DNA-binding motifs (**Figure 2**).

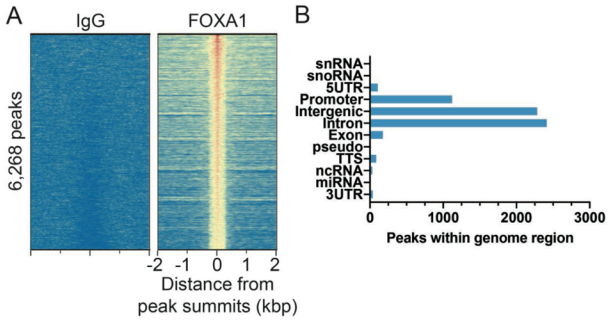

Figure 1: FOXA1 peaks in CUT&RUN. CUT&RUN was performed using 500,000 MCF7 cells with 0.5 µg FOXA1 antibody. Peaks were called using MACS2. (**A**) Heatmap showing FOXA1 peaks relative to IgG negative control antibody (EpiCypher 13-0042) in aligned rows ranked by intensity (top to bottom) and colored such that red indicates high localized enrichment and blue denotes background signal. (**B**) The number of peaks which fall into distinct classes of functionally annotated genomic regions is plotted.

Immunogen:

A synthetic peptide corresponding to human FOXA1 amino acids 422 to 472.

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
WB: 1:1,000 - 1:10,000
IP: 2 - 10 µg/mg lysate

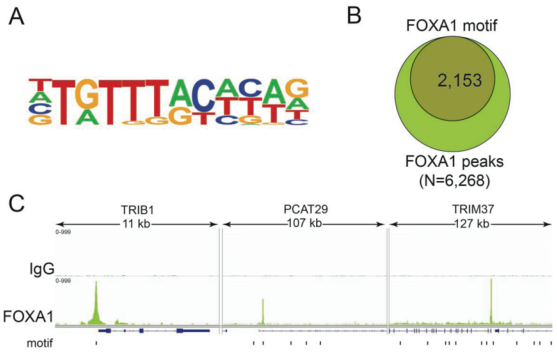

Figure 2: FOXA1 transcription factor binding motif analysis in CUT&RUN. (**A**) Homer software was used to identify known motifs underneath FOXA1 CUT&RUN peaks. The FOXA1 consensus motif was highly enriched, and is represented as a sequence logo position weight matrix. (**B**) The number of FOXA1 peaks containing FOXA1 consensus motifs from panel A is represented by a Venn Diagram. (**C**) Three representative loci showing FOXA1 peaks overlapping with FOXA1 consensus motifs (Integrative Genomics Viewer).

References:

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

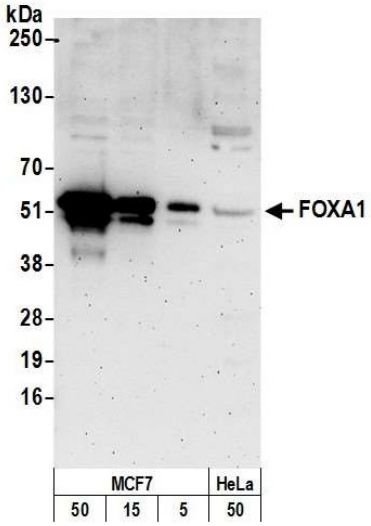

Figure 3: Western blot detection of human and mouse FOXA1. Whole cell lysates were isolated from MCF-7 and HeLa cells using NETN lysis buffer. The indicated amounts (µg) of lysate were loaded onto 4-20% SDS-PAGE gel and analyzed under standard western blot conditions using FOXA1 antibody (0.1 µg/mL).

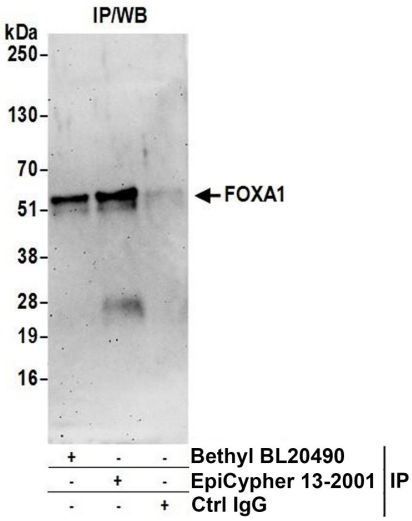

Figure 4: Immunoprecipitation of human FOXA1. EpiCypher FOXA1 antibody (6 µg) was used to immunoprecipitate whole cell lysates isolated from HeLa cells using NETN lysis buffer (1 mg per IP). A negative control IgG antibody and positive control antibody to a different FOXA1 epitope (Bethyl Laboratories) were also used to demonstrate specificity of the IP. Immunoprecipitates were loaded onto 4-20% SDS-PAGE gel (20% of IP loaded) and probed via western blot with EpiCypher FOXA1 antibody (1 µg/mL).

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