diagenode
A Hologic Company

TECHNICAL DATASHEET

SUV39H1 Antibody - ChIP-seq grade

Cat. No. C15410368

Type: Polyclonal **ChIP-seq Grade**	Specificity: Human: positive
Size: 50 µg	Isotype: NA
Concentration: 2.3 µg/µl	Host: Rabbit
Lot No.: A2892-0011	Purity: Affinity purified polyclonal antibody
Storage buffer: PBS containing 0.05% azide	Storage conditions: Store at -20°C; for long storage, store at -80°C. Avoid multiple freeze-thaw cycles.
Precautions: This product is for research use only. Not for use in diagnostic or therapeutic procedures.	

Last Data Sheet Update: June 25, 2020

Description

Other names: KMT1A, MG44

Polyclonal antibody raised in rabbit against human SUV39H1 (Suppressor Of Variegation 3-9 Homolog 1), using two synthetic peptides containing a sequence from the central part and the C-terminus of the protein, respectively.

Applications

Applications	Suggested dilution	References
ChIP *	2 - 5 µg per ChIP	Fig 1, 2
ELISA	1:10,000 - 1:100,000	Fig 3
Western Blotting	1:500	Fig 4

*Please note that the optimal antibody amount per IP should be determined by the end-user. We recommend testing 1 - 5 µg per IP.

Target Description

SUV39H1 (UniProtKB/Swiss-Prot entry O43463) is a histone methyltransferase that specifically trimethylates lysine 9 of histone H3, thereby playing an essential role in transcriptional gene silencing and heterochromatin formation as well as many other regulatory processes. It's also a component of the eNoSC (energy-dependent nucleolar silencing) complex, which mediates silencing of rDNA in response to changes in the intracellular energy status. Loss of function may cause chromosome instability. SUV39H1 is also able to methylate histone H1.

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Validation data

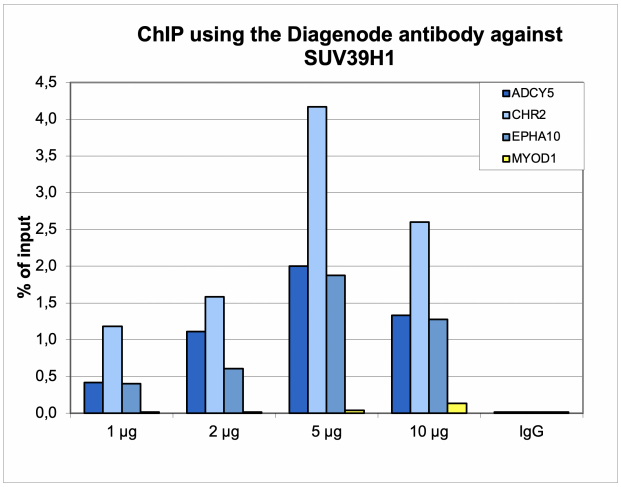
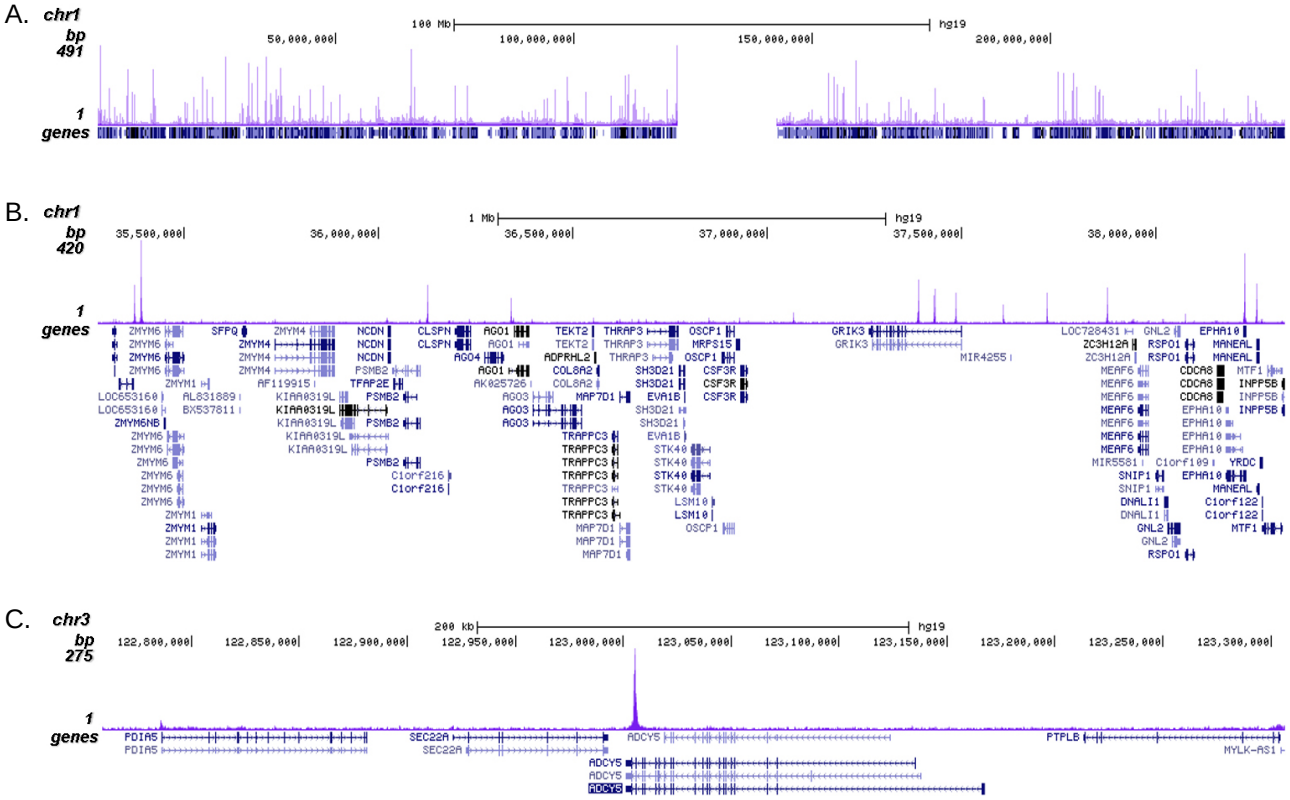


Figure 1. ChIP results obtained with the Diagenode antibody directed against SUV39H1
ChIP assays were performed using HeLa cells, the Diagenode antibody against SUV39H1 (cat. No. C15410368) and optimized PCR primer sets for qPCR. ChIP was performed with the "iDeal ChIP-seq" kit (cat. No. C01010055), using sheared chromatin from 4 million cells. A titration consisting of 1, 2, 5 and 10 µg of antibody per ChIP experiment was analyzed. IgG (2 µg/IP) was used as a negative IP control. Quantitative PCR was performed with primers for the ADCY5 and EPHA10 genes, as well as a chromosome 2 intergenic region, used as positive controls, and for the MYOD1 gene, used as a negative control. Figure 1 shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).



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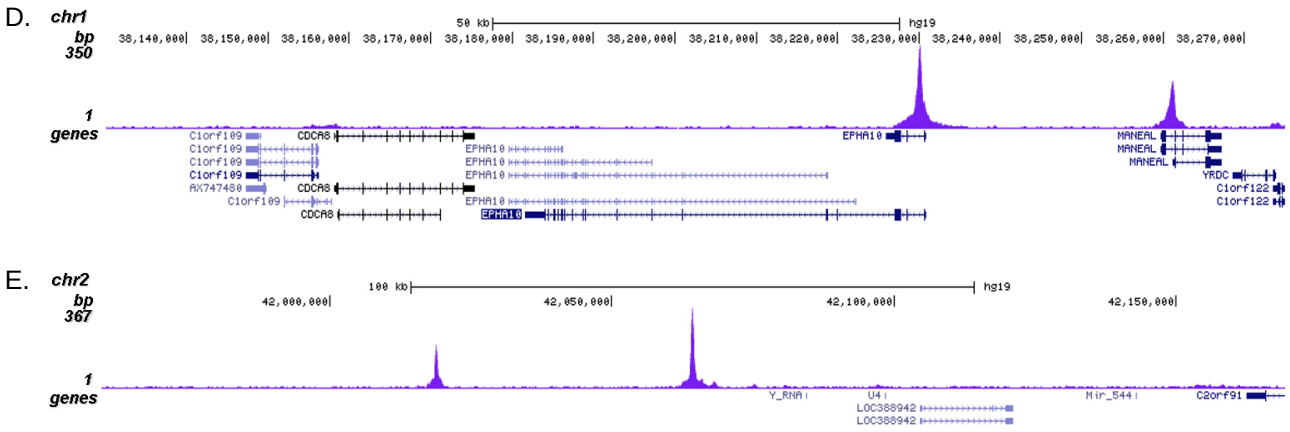

Figure 2. ChIP-seq results obtained with the Diagenode antibody directed against SUV39H1
ChIP was performed with 5 µg of the Diagenode antibody against SUV39H1 (cat. No. C15410368) on sheared chromatin from 4,000,000 HeLa cells using the "iDeal ChIP-seq" kit as described above. The IP'd DNA was subsequently analysed on an Illumina NovaSeq. The 50 bp tags were aligned to the human genome using the BWA algorithm. Figure 2 shows the signal distribution along the complete sequence and a 3 Mb region of human chromosome 1, (figures 2A and B), in two genomic regions surrounding the ADCY5 and EPHA10 positive control genes (figure 2C and D) and in an intergenic region of chromosome 2 (figure 2E).

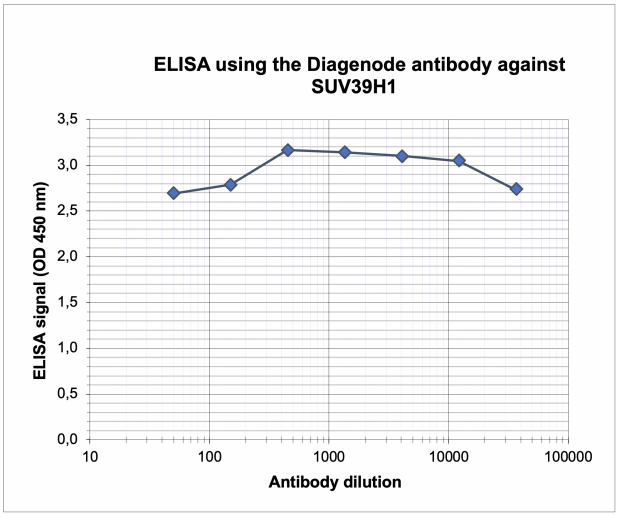

Figure 3. Determination of the antibody titer
To determine the titer of the antibody, an ELISA was performed using a serial dilution of Diagenode antibody directed against SUV39H1 (cat. No. C15410368). The plates were coated with the peptides used for immunization of the rabbit. By plotting the absorbance against the antibody dilution (Figure 3), the titer of the antibody was estimated to be >1:1,000,000.

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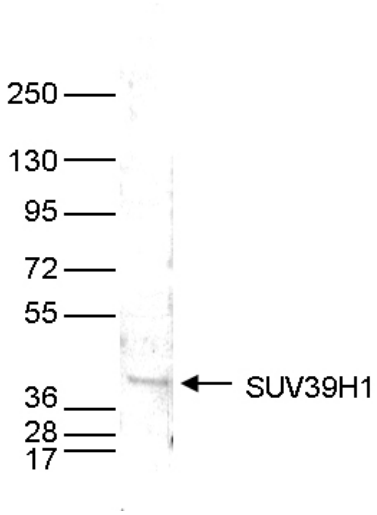

Figure 4. Western blot analysis using the Diagenode antibody directed against SUV39H1

Whole cell extracts from HeLa cells were analysed by Western blot using the Diagenode antibody against SUV39H1 (cat. No. C15410368) diluted 1:500 in TBS-Tween containing 5% skimmed milk. The position of the protein of interest is indicated on the right; the marker (in kDa) is shown on the left.