DNA Methylation & Hydroxymethyl	ation				
Antibody	Cat. No.	Format	Applications	Туре	Purity
5-mC monoclonal antibody 33D3	MAb-081-100	100 µg/100 µl	MeDIP, IF, Dot blot, Flow Cyt	Monoclonal	Protein A/G purified
5-mC monoclonal antibody 33D3	MAb-081-500	500 µg/500 µl	MeDIP, IF, Dot blot, Flow Cyt	Monoclonal	Protein A/G purified
5-mC monoclonal antibody cl. b	MAb-006-100	100 µg/100 µl	MeDIP, IF, Dot blot, Flow Cyt	Monoclonal	Protein A/G purified
5-mC monoclonal antibody cl. b	MAb-006-500	500 µg/500 µl	MeDIP, IF, Dot blot, Flow Cyt	Monoclonal	Protein A/G purified
5-hmC monoclonal antibody (rat)	MAb-633HMC-020	20 µg/13 µl	hMeDIP, IF, Dot blot	Monoclonal	Protein A/G purified
5-hmC monoclonal antibody (rat)	MAb-633HMC-050	50 µg/32 µl	hMeDIP, IF, Dot blot	Monoclonal	Protein A/G purified
5-hmC monoclonal antibody (rat)	MAb-633HMC-100	100 µg/64 µl	hMeDIP, IF, Dot blot	Monoclonal	Protein A/G purified
5-hmC monoclonal antibody (mouse)	MAb-31HMC-020	20 µg/20 µl	hMeDIP, Dot blot, IF, ELISA	Monoclonal	Protein A/G purified
5-hmC monoclonal antibody (mouse)	MAb-31HMC-050	50 µg/50 µl	hMeDIP, Dot blot, IF, ELISA	Monoclonal	Protein A/G purified
5-hmC monoclonal antibody (mouse)	MAb-31HMC-100	100 µg/100 µl	hMeDIP, Dot blot, IF, ELISA	Monoclonal	Protein A/G purified
5-hmC polyclonal antibody (rabbit)	CS-HMC-020	20 µl	hMeDIP, Dot blot, ELISA	Polyclonal	Whole serum
5-hmC polyclonal antibody (rabbit)	CS-HMC-100	100 µl	hMeDIP, Dot blot, ELISA	Polyclonal	Whole serum
5-hmC polyclonal antibody	pAb-HMC-050	50 µg/14.3 µl	hMeDIP, ELISA, Dot blot	Polyclonal	Affinity purified

ChIP-seq grade A	ntibodies				
H3K4me3	pAb-003-050	50 µg/50 µl	ChIP/ChIP-seq, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H3K4me3	MAb-152-050	50 µg/50 µl	ChIP/ChIP-seq, ELISA, WB	Monoclonal	Protein A/G purified
H3K4me2	pAb-035-050	50 µg/42 µl	ChIP/ChIP-seq, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H3K4me1	pAb-037-050	50 µg/43 µl	ChIP/ChIP-seq, ELISA, Dot blot, WB, IF	Polyclonal	Affinity purified
H3K9me3	pAb-056-050	50 µg/33 µl	ChIP/ChIP-seq, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H3K27me3	pAb-069-050	50 µg/48 µl	ChIP/ChIP-seq, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H3K36me3	pAb-058-050	50 µg/50 µl	ChIP/ChIP-seq, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H3K36me3	CS-058-100	100 µl	ChIP/ChIP-seq, ELISA, Dot blot, WB	Polyclonal	Whole serum
H3K79me3	pAb-068-050	50 µg/42 µl	ChIP/ChIP-seq, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H3K9ac	pAb-004-050	50 µg/34 µl	ChIP/ChIP-seq, ELISA, Dot blot	Polyclonal	Affinity purified
H3K9ac	pAb-177-050	50 µg/47 µl	ChIP/ChIP-seq, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H3K9/14ac	pAb-005-044	50 µg/36 µl	ChIP/ChIP-seq, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H3K27ac	pAb-174-050	50 µg/42 µl	ChIP/ChIP-seq, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H4K20me3	pAb-057-050	50 µg/47 µl	ChIP/ChIP-seq, ELISA, Dot blot, WB, IF	Polyclonal	Affinity purified
Pol II	AC-055-100	100 µl	ChIP/ChIP-seq	Monoclonal	Ascites fluid
ERalpha	AC-066-100	100 µl	ChIP/ChIP-seq, ELISA, WB, GSA, IC, IP	Monoclonal	Ascites fluid
TBP	MAb-002-100	100 µg/12,50 µl	ChIP/ChIP-seq, WB	Monoclonal	Protein A/G purified
RARA	CS-155-100	100 µl	ChIP/ChIP-seq, ELISA, WB	Polyclonal	Whole serum
GR	MAb-010-050	50 µg/50 µl	ChIP, ELISA, WB, GSA, IC, Flow Cyt, IP	Monoclonal	Protein A/G purified

Histone ChIP-grade	Antibodies				
H2Apan	pAb-166-050	50 µg/79 µl	ChIP, ELISA, Dot blot	Polyclonal	Affinity purified
H2Bpan	pAb-157-050	50 μg/34 μl	ChIP, ELISA, Dot blot	Polyclonal	Affinity purified
H3K4ac	pAb-165-050	50 μg/34 μl	CHIP, ELISA, Dot blot, WB, IF	Polyclonal	Affinity purified
H3K4un	MAb-149-050	50 µg/50 µl	ChIP, ELISA, WB	Monoclonal	Protein A/G purified
H3K9ac	MAb-185-050	50 μg/50 μl	ChIP, ELISA, WB	Monoclonal	Protein A/G purified
H3K4me1	CS-037-100	100 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Whole serum
H3K4me1	MAb-150-050	50 µg/50 µl	ChIP, ELISA, WB	Monoclonal	Protein A/G purified
H3K4me2	CS-035-100	100 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Whole serum
H3K4me2	MAb-151-050	50 µg/50 µl	ChIP, ELISA, WB	Monoclonal	Protein A/G purified
H3K4me3	pAb-030-050	50 μg/25 μl	ChIP, Dot blot, WB	Polyclonal	Affinity purified
H3K9me1	pAb-065-050	50 µg/43 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H3K9me1	CS-065-100	100 µl	CHIP, ELISA, Dot blot, WB, IF	Polyclonal	Whole serum
H3K9me2	pAb-060-050	50 μg/50 μl	CHIP, ELISA, Dot blot, WB, IF	Polyclonal	Affinity purified
H3K9me2	MAb-154-050	50 µg/50 µl	ChIP, ELISA, WB	Monoclonal	Protein A/G purified

Histone ChIP-grade	Antibodies				
H3K9me3	CS-056-100	100 µl	CHIP, ELISA, Dot blot, WB, IF	Polyclonal	Whole serum
H3K9me3	MAb-153-050	50 µg/50 µl	ChIP, ELISA, WB	Monoclonal	Protein A/G purified
H3K9me3S10p	CS-128-100	100 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Whole serum
H3K27ac	MAb-184-050	50 µg/50 µl	ChIP, ELISA, WB	Monoclonal	Protein A/G purified
H3K27me1	pAb-045-050	50 µg/82 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H3K27me2	pAb-046-050	50 µg/68 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H3K27me2/3	MAb-014-050	50 µg/34 µl	CHIP, Dot blot, WB, IF	Monoclonal	Protein A/G purified
H3K27me3	MAb-181-050	50 µg/50 µl	ChIP, ELISA, WB	Monoclonal	Protein A/G purified
H3K27me3	CS-069-100	100 µl	CHIP, ELISA, Dot blot, WB, IF	Polyclonal	Whole serum
H3K27me3S28p	CS-091-100	100 µl	CHIP, ELISA, Dot blot, WB, IF, IP	Polyclonal	Whole serum
H3K36me1	pAb-089-050	50 µg/54 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H3K36me2	MAb-182-050	50 µg/50 µl	ChIP, ELISA, Dot blot, WB	Monoclonal	Protein A/G purified
H3K36me2	CS-127-100	100 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Whole serum
H3K36me3	MAb-183-050	50 µg/50 µl	ChIP, ELISA, Dot blot, WB, IF	Monoclonal	Protein A/G purified
H3K79me1	pAb-082-050	50 µg/31 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H3K79me1	CS-082-100	100 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Whole serum
H3K79me2	CS-051-100	100 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Whole serum
H3K79me2	pAb-051-050	50 µg/46 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H3K79me3	CS-068-100	100 µl	CHIP, ELISA, Dot blot, WB, IF	Polyclonal	Whole serum
H3R17me2	CS-092-100	100 µl	CHIP, ELISA, Dot blot	Polyclonal	Whole serum
H3K9acS10p	CS-102-100	100 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Whole serum
H3 Pan	CS-135-100	100 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Whole serum
H3S10p	pAb-116-050	50 µg/48 µl	CHIP, ELISA, Dot blot, IF	Polyclonal	Affinity purified
H3S10p	CS-116-100	100 µl	CHIP, ELISA, Dot blot, WB, IF, IP	Polyclonal	Whole serum
H4K20me1	CS-034-100	100 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Whole serum
H4K20me1	MAb-147-100	50 µg/25 µl	ChIP, Dot blot, WB, IF	Monoclonal	Protein A/G purified
H4K20me1	SN-147-100	100 µl	ChIP, Dot blot, WB	Monoclonal	Concentrated supernatant
H4K20me3	CS-057-100	100 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Whole serum
H4K20me3	SN-148-100	100 µl	ChIP, WB	Monoclonal	Concentrated supernatant
H4K8ac	pAb-103-050	50 µg/41 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Affinity purified
H4K8ac	CS-103-100	100 µl	CHIP, ELISA, Dot blot, WB	Polyclonal	Whole serum
H4pan	pAb-156-050	50 µg/44 µl	CHIP, ELISA, Dot blot	Polyclonal	Affinity purified

# Custom polyclonal antibodies

Diagenode offers a custom service to meet your specific research needs. Our Exclusive Antibody Program has several unique features:

- **Flexibility**: Choose our custom peptide design / synthetis / coupling service or provide us with your peptide of interest.
- **Support**: Diagenode provides top-level support along the Immunisation Program.
- **High-Quality products**: Our Extended Immunisation Program will ensure that you receive antibodies with higher titer and affinity than any other supplier provide. Moreover at the end of the program you will receive purified anti-serum.
- **Extension of partnership**: We are pleased to collaborate with you in co-developing any commercially interesting antibody.

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# **Epigenetic Antibodies**

Diagenode is providing the most trusted and most validated antibodies for the **Epigenetics** market





# ANTIBODY CHARACTERIZATION

Diagenode is involved in several European programs, requiring us to produce high quality antibodies for the epigenetic field. This has allowed us to develop our antibody production and characterization procedures together with academic researchers. Therefore we guarantee that our antibodies meet the standards required by you, the researcher.

The production of our antibodies is selected through a number of sources including:

- Direct collaborations (including European programs)
- Customer feedback (licensing)
- Research focus areas
- Conferences

The most majority of our antibodies are developed and characterized in-house. These are complemented with high quality antibodies sourced from academic laboratories or primary manufacturers.

### Characterization and Quality control at Diagenode

At Diagenode we commonly test using Peptide ELISA, Western Blot, Immunofluorescence and / or Dot Blot techniques. Specific antibodies will be characterized using Chromatin Immunoprecipitation techniques with all our data available on our antibody datasheets. A selection of antibodies will be characterized using our inhouse Illumina Instrument for ChIP-seq.





# Diagenode produces specific ChIP-seg grade antibodies

Diagenode validates specific ChIP-grade antibodies using the ChIP-seq (Illumina) approach.



Figure 2. ChIP was performed on sheared chromatin from 2 000 000 mouse 3T3 MEF's using the OneDay ChIP kit and 2 µg of H3K4me3 antibody. Two different batches of H3K4me3 have been compared. ChIP-seg was performed on an Illumina GA II using 20 ng of DNA and standard procedures.

Reference papers citing Diagenode antibodies.
<b>5-methylcytosine (MAb-081-100)</b> Natt D, Rubin CJ, Wright D, Johnsson M, Belteky J, Andersson L, Jen methylation between wild and domesticated chickens., <i>BMC Genom</i>
H3K4me3 (pAb-003-050; old cat. pAb-MEHAHS-024) Miyanari Y, Torres-Padilla ME, Control of ground-state pluripotency
H3K27me3 (CS-069-100) Tavares L, Dimitrova E, Oxley D, Webster J, Poot R, Demmers J, Bezs N, RYBP-PRC1 Complexes Mediate H2A Ubiquitylation at Polycomb
H3K9/14ac (pAb-005-044; old cat. pAb-ACHBHS-044) Martens JH, Brinkman AB, Simmer F, Françoijs KJ, Nebbioso A, Epigenetic Landscape in Acute Promyelocytic Leukemia., <i>Cancer Ce</i>
<b>EZH2 (pAb-039-050)</b> Tavares L, Dimitrova E, Oxley D, Webster J, Poot R, Demmers J, Bezsi N, RYBP-PRC1 Complexes Mediate H2A Ubiquitylation at Polycomb

# ANTIBODY QC & SX-8G IP-STAR® AUTOMATED SYSTEM

# **Batch-to-batch comparison**

Diagenode's is dedicated to characterize every batch of antibody using established QC procedures, thereby maximizing the reproducibility of our antibodies between batches.

Figure 1. Four different batches of H3K4me3 are tested in the same ChIP experiment. Samples are analyzed by qPCR using GAPDH promoter (positive locus) and Myoglobin exon 2 (negative locus) primer pairs.



# Diagenode QC antibodies for ChIP on the SX-8G IP-Star<sup>®</sup> Automated System

Diagenode offers Auto ChIP kits for running your experiments on the SX-8G IP-Star® Automated System. Now you can optimize and standardize your ChIP assays using our automated system to ensure reliable downstream assays such as library generation for ChIP-sequencing.

#### SX-8G IP-Star<sup>®</sup> ensures maximum reproducibility between samples and experiments



Figure 3. The data shows high reproducibility of automated ChIP experiments. Specifically, Auto ChIP assays using H3K9me3 and HDAC1 were run in duplicate to test the reproducibility of the ChIP reactions. IP incubation times were 15h for each antibody. For H3K9me3, a cell dependent methylated region of TSH2B, was selected as positive control locus whereas the open C-fos promoter region was used as negative control locus. For HDAC1, p21 and GAPDH have been used as positive and negative locus respectively.



Figure 4. The SX-8G IP-Star® demonstrates a high level of versatility for antibodies used in ChIP assays. Automated ChIP experiments were performed using chromatin from 700.000 HeLa cells. Figure A shows the results of two ChIP experiments using histone antibodies (H4K20me3 and H3K27me3, markers for gene repression and heterochromatin). Recovery is demonstrated with several differing regions. Satellites regions (e.i Sat2) represent "closed chromatin" which is highly compacted and hypermethylated. The c-fos promoter region is an "open chromatin region". TSH2B is a cell dependent hypermethylated region which is characterized by markers as H3K9me3 and H4K20me3. To demonstrate further versatility, Figure B represents automated ChIP results with non-histone antibodies.

#### Please contact us to learn more about the SX-8G IP-Star<sup>®</sup> Automated System.