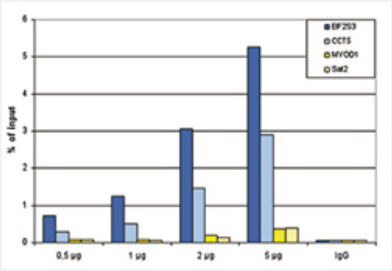
Histone H3 (K79me2) polyclonal antibody

Catalog # PAB31268 Size 50 ug

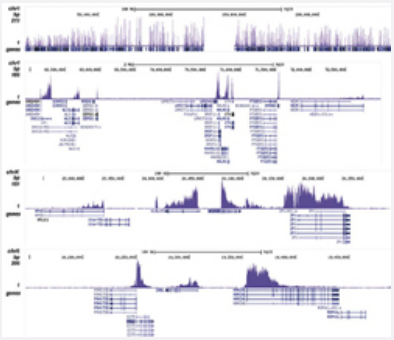
Applications

ChIP



ChIP assays were performed using human HeLa cells. A titration consisting of 0.5, 1, 2 and 5 ug of antibody per ChIP experiment was analyzed. IgG (1 ug/IP) was used as a negative IP control. Quantitative PCR was performed with primers specific for the coding regions of the active EIF2S3 and CCT5 genes, used as positive controls, and for the inactive MYOD1) gene and the Sat2 satellite repeat, used as negative controls. The figure shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).

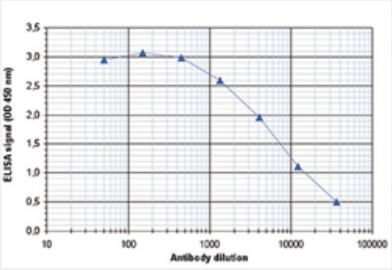
ChIP-Seq



ChIP was performed with 1 ug of antibody. The figure shows the peak distribution along the complete sequence and a 5 Mb region of chromosome 1 and in two 300 kb regions surrounding the EIF2S3 and CCT5 positive control genes.

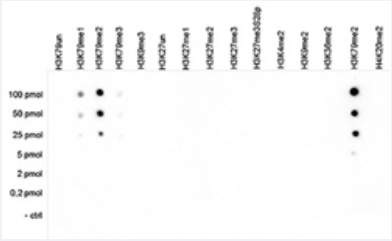
Western Blot (Cell lysate)

Western Blot (Cell lysate) analysis of (1) 25 ug whole cell extracts of HeLa cells, (2) 15 ug histone extracts of HeLa cells, (3) 1 ug of recombinant histone H2A, (4) 1 ug of recombinant histone H2B, (5) 1 ug of recombinant histone H3, and (6) 1 ug of recombinant histone H4.



Enzyme-linked Immunoabsorbent Assay

ELISA is a quantitative method used to determine the titer of the antibody using a serial dilution of antibody against Histone H3 (K79me2). The antigen used was a peptide containing the histone modification of interest. By plotting the absorbance against the antibody dilution, the titer of the antibody was estimated to be 1:6600.



Dot Blot

Cross reactivity tests using the Histone H3 (K79me2) antibody.
Dot Blot analysis was performed with peptides containing other modifications and unmodified sequences of histone H3. One hundred to 0.2 pmol of peptide containing the respective histone modification were spotted on a membrane. The antibody was used at a dilution of 1:5000. The figure shows a high specificity of the antibody for the modification of interest.

Specification

Product Description	Rabbit polyclonal antibody raised against synthetic peptide of Histone H3 (K79me2).
Immunogen	A synthetic peptide (conjugated with KLH) corresponding to Histone H3, dimethylated at lysine 79.
Host	Rabbit
Reactivity	Human, Yeast
Form	Liquid
Purification	Affinity purification
Recommend Usage	ELISA (1:500) Western Blot (1:200) ChIP/CHIP-seq (1-2 ug/CHIP) Dot Blot (1:5000) The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS (0.05% sodium azide, 0.05% proclin 300).
Storage Instruction	Store at -20°C. For long term storage store at -80°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which shoul d be handled by trained staff only.

Applications

- ChIP

ChIP assays were performed using human HeLa cells. A titration consisting of 0.5, 1, 2 and 5 ug of antibody per ChIP experiment was analyzed. IgG (1 ug/IP) was used as a negative IP control. Quantitative PCR was performed with primers specific for the coding regions of the active EIF2S3 and CCT5 genes, used as positive controls, and for the inactive MYOD1) gene and the Sat2 satellite repeat, used as negative controls. The figure shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).

- ChIP-Seq

ChIP was performed with 1 ug of antibody. The figure shows the peak distribution along the complete sequence and a 5 Mb region of chromosome 1 and in two 300 kb regions surrounding the EIF2S3 and CCT5 positive control genes.

- Western Blot (Cell lysate)

Western Blot (Cell lysate) analysis of (1) 25 ug whole cell extracts of HeLa cells, (2) 15 ug histone extracts of HeLa cells, (3) 1 ug of recombinant histone H2A, (4) 1 ug of recombinant histone H2B, (5) 1 ug of recombinant histone H3, and (6) 1 ug of recombinant histone H4.

- Enzyme-linked Immunoabsorbent Assay

ELISA is a quantitative method used to determine the titer of the antibody using a serial dilution of antibody against Histone H3 (K79me2). The antigen used was a peptide containing the histone modification of interest. By plotting the absorbance against the antibody dilution, the titer of the antibody was estimated to be 1:6600.

- Dot Blot

Cross reactivity tests using the Histone H3 (K79me2) antibody.
Dot Blot analysis was performed with peptides containing other modifications and unmodified sequences of histone H3. One hundred to 0.2 pmol of peptide containing the respective histone modification were spotted on a membrane. The antibody was used at a dilution of 1:5000. The figure shows a high specificity of the antibody for the modification of interest.

Gene Info — HIST1H3A

Entrez GeneID	8350
Protein Accession#	P68431
Gene Name	HIST1H3A
Gene Alias	H3/A, H3FA
Gene Description	histone cluster 1, H3a
Omim ID	602810
Gene Ontology	Hyperlink

Gene Summary	Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chro mosomal fiber in eukaryotes. This structure consists of approximately 146 bp of DNA wrapped ar ound a nucleosome, an octamer composed of pairs of each of the four core histones (H2A, H2B, H3, and H4). The chromatin fiber is further compacted through the interaction of a linker histone, H 1, with the DNA between the nucleosomes to form higher order chromatin structures. This gene is intronless and encodes a member of the histone H3 family. Transcripts from this gene lack polyA t ails; instead, they contain a palindromic termination element. This gene is found in the large histon e gene cluster on chromosome 6p22-p21.3. [provided by RefSeq
Other Designations	H3 histone family, member A|histone 1, H3a

Publication Reference

- DOT1L Activity Promotes Proliferation and Protects Cortical Neural Stem Cells from Activation of ATF4-DDIT3-Mediated ER Stress In Vitro.

  Roidl D, Hellbach N, Bovio PP, Villarreal A, Heidrich S, Nestel S, Grüning BA, Boenisch U, Vogel T.

  Stem Cells 2016 Jan; 34(1):233.

  Application: ChIP-Seq, WB-Ce, Mouse, Mouse cortical cells

- Anticheckpoint pathways at telomeres in yeast.

  Ribeyre Cyril, Shore David.

  Nature Structural & Molecular Biology 2012 Feb; 19(3):307.

  Application: ChIP, Yeast, Yeast cells

Pathway

- Systemic lupus erythematosus