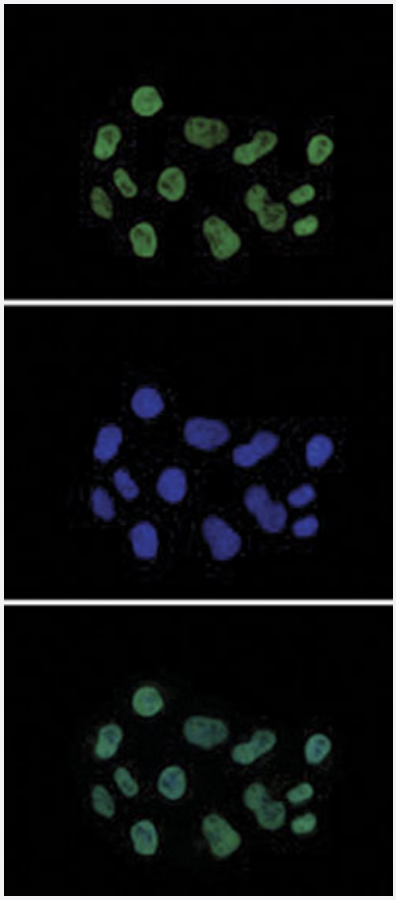
Histone H3 (K27ac) polyclonal antibody

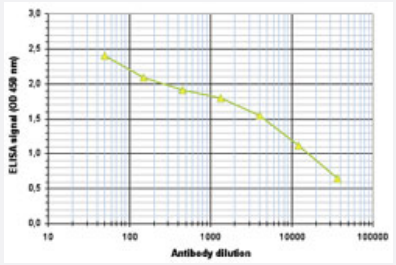
Catalog # PAB31317 Size 50 ug

Applications



Immunofluorescence

Immunofluorescent staining of Hela cell line with antibody followed by an anti-rabbit antibody conjugated to Alexa488 (top). The middle panel shows staining of the nuclei with DAPI. A merge of the two stainings (bottom).



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 (K27ac). 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 1:8300.

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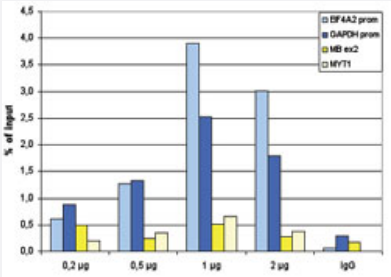
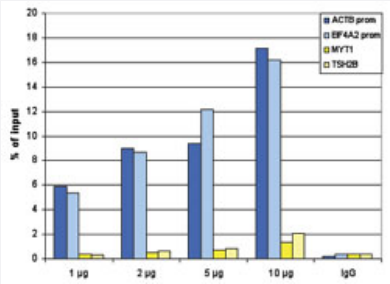
ChIP



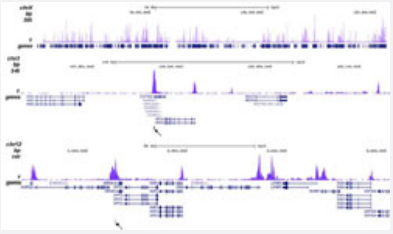
ChIP assays were performed using human K562 cells. A titration consisting of 0.2, 0.5, 1 and 2 ug of antibody per ChIP experiment was analyzed. IgG (1 ug/IP) was used as a negative IP control. Quantitative PCR was performed with primers for the promoters of the active GAPDH and EIF4A2 genes, used as positive controls, and for the coding regions of the inactive MB and MYT1 genes, 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



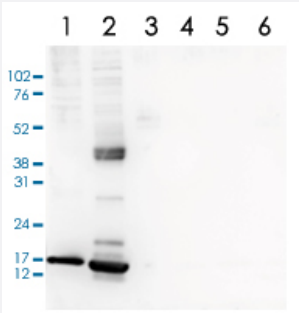
ChIP assays were performed using human HeLa cells. A titration consisting of 1, 2, 5 and 10 ug of antibody per ChIP experiment was analyzed. IgG (2 ug/IP) was used as a negative IP control. Quantitative PCR was performed with primers for the promoters of the active EIF4A2 and ACTB genes, used as positive controls, and for the inactive TSH2B and MYT1 genes, used as negative controls.

ChIP-Seq



ChIP was performed on sheared chromatin from 100,000 K562 cells using antibody. The figure shows the peak distribution along the complete human X-chromosome and the peak distribution in two regions surrounding the EIF4A2 and GAPDH positive control genes, respectively. The position of the PCR amplicon, used for validating the ChIP assay is indicated with an arrow.

Western Blot



Western Blot 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, (6) 1 ug of recombinant histone H4.

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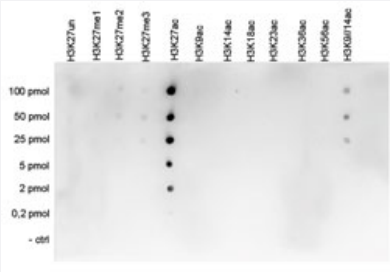

Dot Blot

Cross reactivity test using the Histone H3 (K27ac) antibody.
Dot Blot analysis was performed with peptides containing other histone modifications and the unmodified H3K27. One hundred to 0.2 pmol of the respective peptides were spotted on a membrane. The antibody was used at a dilution of 1:20000. 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 (K27ac).
Immunogen	A synthetic peptide (conjugated with KLH) corresponding to Histone H3, acetylated at lysine 27.
Host	Rabbit
Reactivity	Human, Mouse, Rat, Arabidopsis
Form	Liquid
Purification	Affinity purification
Recommend Usage	ELISA (1:500) Western Blot (1:1000) ChIP (1 ug/IP) Dot Blot (1:20000) Immunofluorescence (1:500) 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

- Immunofluorescence

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Gene Info — HIST1H3A

Entrez GeneID	8350
Protein Accession#	P68431
Gene Name	HIST1H3A
Gene Alias	H3/A, H3FA

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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

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  Application: ChIP-Seq, Human, Human macrophages, Human monocytes

- Krüppel-like Transcription Factor KLF10 Suppresses TGFβ-Induced Epithelial-to-Mesenchymal Transition via a Negative Feedback Mechanism.

  Mishra VK, Subramaniam M, Kari V, Pitel KS, Baumgart SJ, Naylor RM, Nagarajan S, Wegwitz F, Ellenrieder V, Hawse JR, Johnsen SA.

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  Application: ChIP-Seq, Human, A-549 cells

- c-Myc Antagonises the Transcriptional Activity of the Androgen Receptor in Prostate Cancer Affecting Key Gene Networks.

  Barfeld SJ, Urbanucci A, Itkonen HM, Fazli L, Hicks JL, Thiede B, Rennie PS, Yegnasubramanian S, DeMarzo AM, Mills IG.

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  Application: ChIP, Human, LNCaP cells

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- Epigenetically-driven anatomical diversity of synovial fibroblasts guides joint-specific fibroblast functions.

  Frank-Bertoncelj M, Trenkmann M, Klein K, Karouzakis E, Rehrauer H, Bratus A, Kolling C, Armaka M, Filer A, Michel BA, Gay RE, Buckley CD, Kollias G, Gay S, Ospelt C.

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  Application: ChIP-Seq, Human, Human synovial fibroblasts

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  Application: ChIP-Seq, WB-Ce, Mouse, MEFs

- The non-coding variant rs1800734 enhances DCLK3 expression through long-range interaction and promotes colorectal cancer progression.

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  Application: ChIP-Seq, Human, HCT-116, LoVo cells

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  Application: ChIP, Human, Ewing sarcoma tumors

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  Application: ChIP-Seq, Human, Human T cells

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  Jozwik KM, Chernukhin I, Serandour AA, Nagarajan S, Carroll JS.

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  Application: ChIP-Seq, Human, MCF-7 cells

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  Application: ChIP-Seq, Human, Monocytes, Neutrophils, T cells

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  Application: ChIP, Human, Monocytes

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  Application: ChIP-Seq, Human, Kasumi-1 cells

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  Application: ChIP, Re-ChIP, Human, CD4+ central memory Tcells

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  Application: ChIP, Human, GM12878, JVM-2, KARPAS-422, SU-DHL-5 cells

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  Application: ChIP, Mouse, PF-MCB cells

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  Application: Array, Array

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  Application: ChIP, ChIP-Seq, Human, SEM cells

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  Application: ChIP-Seq, Human, HeLa cells

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  Application: ChIP-Seq, Human, Human naive B cells

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  Application: ChIP-Seq, WB-Ce, Human, A673, SK-N-MC, STA-ET-7.2 cells

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  Application: WB-Tr, Mouse, MEFs

Pathway

- Systemic lupus erythematosus

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