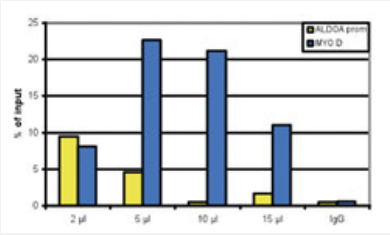
Histone H3 (K4me1) polyclonal antibody

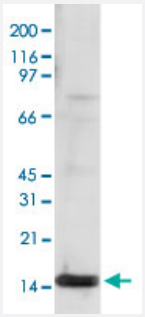
Catalog # PAB31261 Size 100 uL

Applications



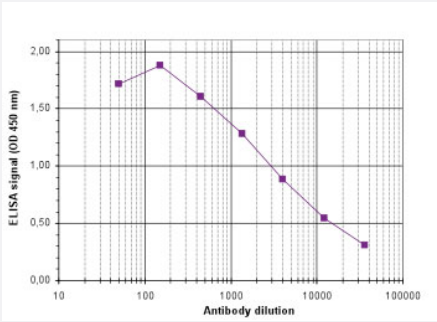
ChIP

ChIP assays were performed using human osteosarcoma (U2OS) cells. A titration of the antibody consisting of 2, 5, 10 or 15 ul per ChIP experiment was analysed. IgG (5 ug/IP) was used as negative IP control. Quantitative PCR was performed with primers for the promoter of the ALDOA gene and for the coding region of the myogenic differentiation gene (MYOD), a gene that is inactive at normal conditions. The figure shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).



Western Blot (Cell lysate)

Western Blot (Cell lysate) analysis of 15 ug histone extracts of HeLa cells.



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 (K4me1). 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 1:3800.

Dot Blot

Cross reactivity test using the Histone H3 (K4me1) antibody.
Dot Blot analysis was performed with peptides containing other modifications or unmodified sequences of histone H3. Other histone modifications include dimethylation and trimethylation of the same lysine and monomethylation, dimethylation and trimethylation of lysine 9, 27 and 36 and 79. One hundred to 0.2 pmol of the 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 (K4me1).
Immunogen	A synthetic peptide (conjugated with KLH) corresponding to Histone H3, monomethylated at lysine 4.
Host	Rabbit
Reactivity	Human, Xenopus, Zebra fish
Form	Liquid
Purification	Whole antiserum
Recommend Usage	ELISA (1:100) Western Blot (1:1000) ChIP (1 ug/CHIP) Dot Blot (1:50000) The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS (0.05% sodium azide).
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

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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

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

  Stefan J. Barfeld, Alfonso Urbanucci, Harri M. Itkonen, Ladan Fazli , Jessica L. Hicks , Bernd Thiede , Paul S. Rennie , Srinivasan Yegnasubramanian, Angelo M. DeMarzo , Ian G. Mills.

  EbioMedicine 2017 Apr; 18:83.

  Application: ChIP, Human, LNCaP cells

- Principles of nucleation of H3K27 methylation during embryonic development.

  van Heeringen SJ, Akkers RC, van Kruijsbergen I, Arif MA, Hanssen LL, Sharifi N, Veenstra GJ.

  Genome Research 2014 Mar; 24(3):401.

  Application: ChIP-Seq, Nematoda, X. tropicalis and Xenopus laevis embryos

- The developmental epigenomics toolbox: ChIP-seq and MethylCap-seq profiling of early zebrafish embryos.

  Bogdanović O, Fernández-Miñán A, Tena JJ, de la Calle-Mustienes E, Gómez-Skarmeta JL.

  Methods 2013 Aug; 62(3):207.

  Application: ChIP, Fish, Zebrafish embryos

- Dynamics of enhancer chromatin signatures mark the transition from pluripotency to cell specification during embryogenesis.

  Bogdanovic O, Fernandez-Minan A, Tena JJ, de Lacalle-Mustienes E, Hidalgo C, van Kruysbergen I, van Heeringen SJ, Veenstra GJ, Gomez-Skarmeta JL.

  Genome Research 2012 Oct; 22(10):2043.

  Application: ChIP, Fish, Zebrafish embryos

Pathway

- Systemic lupus erythematosus