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Datasheet for 600-401-X46

Histone H4 pan Antibody

Overview

Description:	Anti-Histone H4 pan (RABBIT) Antibody - 600-401-X46
Item No.:	600-401-X46
Size:	50 µg
Applications:	ChIP, ELISA, IF, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	Histones are the main constituents of the protein part of chromosomes of eukaryotic cells. They are rich in the amino acids arginine and lysine and have been greatly conserved during evolution. Histones pack the DNA into tight masses of chromatin. Two core histones of each class H2A, H2B, H3 and H4 assemble and are wrapped by 146 base pairs of DNA to form one octameric nucleosome. Histones play a internal role in the regulation of transcription, DNA repair, DNA replication and chromosomal stability. These different functions are established via a complex set of post-translational modifications which either directly or indirectly alter chromatin structure and DNA accessibility to facilitate transcriptional activation or repression or other nuclear processes. Anti-Histone H4 pan Antibody is ideal for research in Chromatin Remodeling, Gene Expression and Epigenetics.
Synonyms:	Histone H4, HIST1H4B, HIST1H4C, HIST1H4D, HIST1H4E, HIST1H4F, HIST1H4H, HIST1H4I, HIST1H4J, HIST1H4J, HIST1H4L, HIST2H4A, HIST2H4B, HIST4H4
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	HIST1H4A
Reactivity:	Human
Immunogen Type:	Conjugated Peptide

Immunogen:	Anti-Histone H4 pan Antibody was produced in rabbits by repeated immunizations with a synthetic peptide containing a sequence from the internal region of histone H4.
Purity/Specificity:	Anti-Histone H4 pan Antibody was purified by affinity purification. Cross reactivity with other species was not tested.
Relevant Links:	• UniProtKB - P62805 • GeneID - 121504 • NCBI - NP_001029249

Application Details

Tested Applications:	ChIP, ELISA, IF, WB
Application Note:	Anti-Histone H4 pan Antibody has been tested by Chromatin Immunoprecipitation, Western Blot, Immunofluorescence, and ELISA. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ChIP:	2-5 µg per IP
ELISA:	1:500
IF:	1:1,000
WB:	1:1,000

Formulation

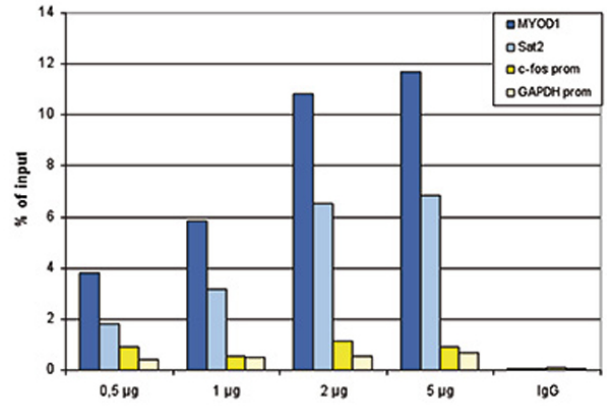
Physical State:	Liquid (sterile filtered)
Concentration:	1.15 mg/ml by UV absorbance at 280 nm
Buffer:	0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2
Preservative:	0.05% (w/v) Sodium Azide and 0.05% ProClin 300
Stabilizer:	None

Shipping & Handling

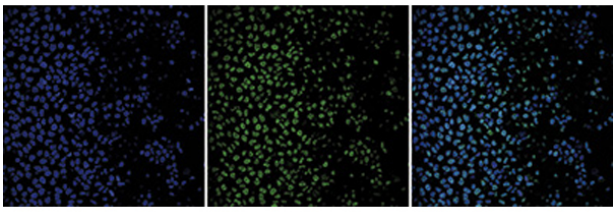
Shipping Condition:	Dry Ice

Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

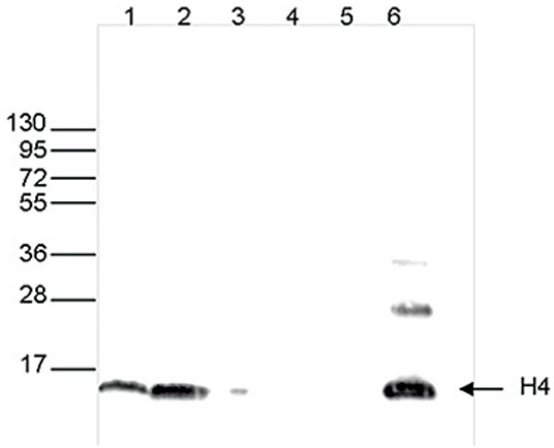
Images



ChIP
ChIP results with Anti-Histone H4.
ChIP assays were performed using human HeLa cells, Anti-Histone H4, and optimized PCR primer pairs for qPCR. ChIP was performed with the "Auto Histone ChIP-seq" kit, using sheared chromatin from 1 million cells on the IP-Star Compact automated system. A titration consisting of 0.5, 1, 2 and 5 µg of antibody per ChIP experiment was analyzed. IgG (1 µg/IP) was used as a negative IP control. Quantitative PCR was performed with primers specific for the promoters of the active GAPDH and c-fos genes, and for the inactive MYOD1 gene and the Sat2 satellite repeat. Figure shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).

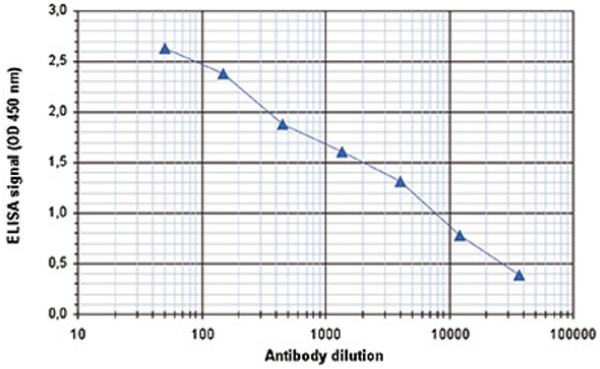


Immunofluorescence Microscopy
Immunofluorescence using Anti-Histone H4.
HeLa cells were stained with Anti-Histone H4 and with DAPI. Cells were fixed with 4% formaldehyde for 10' and blocked with PBS/TX-100 containing 1% BSA. The cells were immunofluorescently labeled with the H4 antibody (middle) diluted 1:1,000 in blocking solution followed by an anti-rabbit antibody conjugated to Alexa488. The left panel shows staining of the nuclei with DAPI. A merge of the two stainings is shown on the right.



Western Blot

Western blot analysis using Anti-Histone H4.
Western blot was performed on whole cell extracts (25 µg, lane 1) and histone extracts (15 µg, lane 2) from HeLa cells, and on 1 µg of recombinant histone H2A, H2B, H3 and H4 (lane 3, 4, 5 and 6, respectively) using Anti-Histone H4. The antibody was diluted 1:1,000 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.



ELISA

Determination of the titer of Anti-Histone H4.
To determine the titer of the antibody, an ELISA was performed using a serial dilution of Anti-Histone H4 in antigen coated wells. By plotting the absorbance against the antibody dilution, the titer of the antibody was estimated to be 1:3,000.

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