Datasheet for ABIN5706797

anti-Histone H4 antibody (meLys20)

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Overview

Quantity:	50 µg
Target:	Histone H4
Binding Specificity:	meLys20
Reactivity:	Human, Mouse, C. elegans
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Histone H4 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Chromatin Immunoprecipitation (ChIP), Dot Blot (DB), Multiplex Assay (MA), Fluorescence Microscopy (FM)

Product Details

Purpose:	Histone H4 K20me1 Antibody
Immunogen:	Immunogen: Histone H4 [Monomethyl Lys20] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic monomethylated peptide surrounding Lysine 20 of human Histone H4. Immunogen Type: Conjugated Peptide
Isotype:	IgG
Cross-Reactivity (Details):	This antibody reacts with human Histone H4.
Characteristics:	Synonyms: rabbit anti-Histone H4 monomethyl Lys20 antibody, H4K20me1, HIST2H4B, HIST1H4H, HIST1H4I, HIST1H4J, HIST1H4K, HIST1H4L, HIST2H4, HIST2H4A, HIST1H4A,

Product Details

	HIST1H4B, HIST1H4C, HIST1H4D, HIST1H4E, HIST1H4F, histone cluster 4, H4, histone 4, H4
Purification:	Anti-Histone H4 [Monomethyl Lys20] was affinity purified from monospecific antiserum by immunoaffinity chromatography.
Sterility:	Sterile filtered

Target Details

Target:	Histone H4
Abstract:	Histone H4 Products
Background:	Background: SET8 specifically catalyzes the mono-methylation of H4 at K20. Loss of this crucial methylation causes multiple DNA breaks, which instigates a p53-dependent DNA damage response to avoid mitosis and aberrant chromosomal activity. Therefore, this PTM is essential to genome replication and stability through S-phase. In mammalian stem cells, Xist expression blocks the formation of H4K20me1, which is one of the first examples of a direct connection between chromatin and stem cell differentiation. Anti-Histone H4 are ideal for researchers interested in Chromatin Modifiers, Chromatin Research, DNA Repair, DNA replication Transcription Translation and Splicing, Histones and Modified Histones, and Epigenetics research.
Gene ID:	121504
NCBI Accession:	NP_001029249
UniProt:	P62805

Application Details

Application Notes:	Immunohistochemistry Dilution: 1:50 Application Note: Anti-Histone H4 [Monomethyl Lys20] antibody is tested for Western Blot, Dot Blot, Chromatin Immunoprecipitation, Immunofluorescence, and Immunocytochemistry. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~13 kDa corresponding to Histone H4 protein by Western Blotting in HeLa histone prep lysate or the appropriate cell lysate or extract. Epi-Plus™ antibody production in collaboration with Novus Biologicals. ChIP Dilution: 2-5 µg/million cells Western Blot Dilution: 1:500 IF Microscopy Dilution: 1:50

Application Details

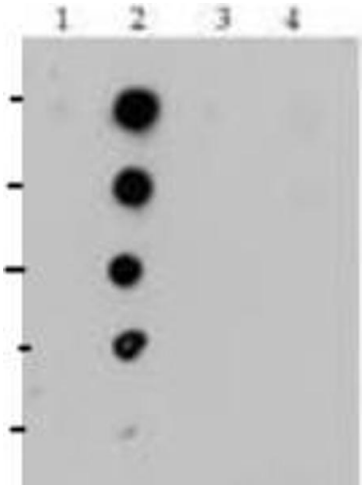
	Other: Dot Blot 1:1000
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1.12 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: 30 % Glycerol Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	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.
Expiry Date:	12 months

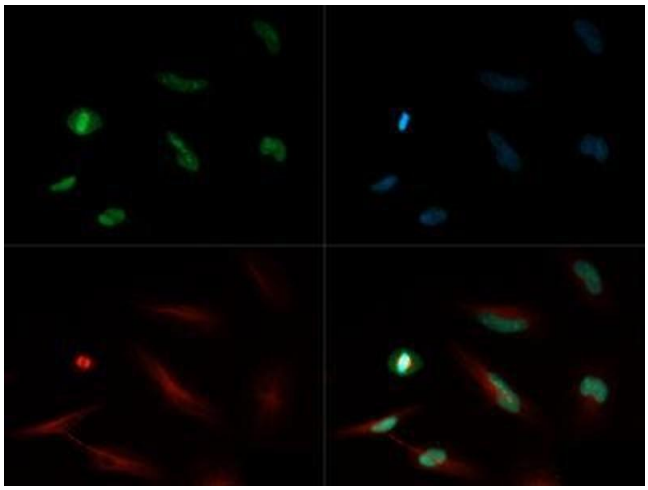
Publications

Product cited in:	Moiseeva, Hood, Schamus, OConnor, Conrads, Bakkenist: "ATR kinase inhibition induces unscheduled origin firing through a Cdc7-dependent association between GINS and And-1." in: **Nature communications**, Vol. 8, Issue 1, pp. 1392, (2018) (PubMed).



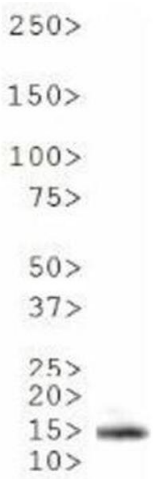
Dot Blot

Image 1. Dot Blot of Rabbit Histone H4 [Monomethyl Lys20] Antibody. Antigen: Lane 1: unmodified. Lane 2: K20me1. Lane 3: K20me2. Lane 4: K20me3. Load: 0.6, 1, 3, 6, and 10 picomoles of peptide. Primary antibody: Histone H4 [Monomethyl Lys20] antibody at 2 µg/mL for 45 min at 4 °C. Secondary antibody: Dylight™488 rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5 % BLOTTO overnight at 4 °C.



Fluorescence Microscopy

Image 2. Immunofluorescence of Rabbit Anti-Histone H4 [Monomethyl Lys20] Antibody. Tissue: HeLa cells. Fixation: 0.5 % PFA. Antigen retrieval: Not required. Primary antibody: Histone H4 [Monomethyl Lys20] antibody at a 1:500 dilution for 1 h at RT. Secondary antibody: FITC secondary antibody at 1:10,000 for 45 min at RT. Localization: Histone H4 [Monomethyl Lys20] is nuclear and chromosomal. Staining: Histone H4 [Monomethyl Lys20] is expressed in green, nuclei and alpha-tubulin are counterstained with DAPI (blue) and Dylight 550 (red).



Western Blotting

Image 3. Western Blot of Rabbit Anti-Histone H4 [Monomethyl Lys20] Antibody. Lane 1: C. elegans embryo lysate. Load: 30 µg per lane. Primary antibody: Histone H4 [Monomethyl Lys20] at 1:500 for overnight at 4 °C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5 % BLOTTO overnight at 4 °C. Predicted/Observed size: ~13 kDa. Other band(s): None.

Please check the product details page for more images. Overall 5 images are available for ABIN5706797.