Anti-H4K20me1 (Histone H4 (mono-methyl K20)) Antibody

Catalog Number: CE-H351r, 100 µg

Introduction

Histone H4 is one of the 5 main histone proteins involved in the structure of chromatin in eukaryotic cells.

Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. Two molecules of each of the four core histones (H2A, H2B, H3, and H4) form an octamer, around which approximately 146 bp of DNA is wrapped in repeating units, called nucleosomes. The linker histone, H1, interacts with linker DNA between nucleosomes and functions in the compaction of chromatin into higher order structures. This gene is intronless and encodes a member of the histone H4 family. Transcripts from this gene lack polyA tails but instead contain a palindromic termination element. A diverse and elaborate array of post-translational modifications including acetylation, phosphorylation, methylation, ubiquitination, and ADP-ribosylation occurs on the N-terminal tail domains of histones.

Methylation of position-specific lysine residues in histone N termini is a central modification for regulating epigenetic transitions in chromatin. Each methylatable lysine residue can exist in a mono, di, or tri methylated state. Arginine resdiues can also by mono or di methylated.

Description

Rabbit polyclonal antibody.

Applications

Western blot (1:500-1000), IF (1:100-500), and Dot blot (1:500), may be used for other applications.

Immunogen

Synthetic Histone H4 peptide with Lys20 methylated and conjugated to KLH (Genebank Accession No. NP_778224).

Specificity

Recognizes endogenous levels of Histone H4 metylated at Lys20.

Purification

Immunoaffinity chromatography**.**

Isotype

IgG.

Storage

Store at 4 ^{o}C; Stable for at least 6 months from the date of shipment. Non-hazardous. For long-term storage, keep at -20 ^{o}C.

Concentration

1 µg/µl.

Application data:

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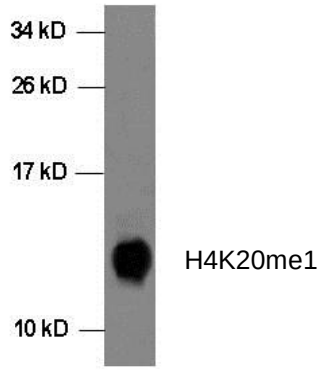

Fig. 1, Western Blot. Endogenous H4K20me1 detected in 293T nuclear extract (1:500 primary antibody).

		H3K36me	H3K36me3	H3K36me2	H3K36me1
		H3K36me	H3K36me3	H3K36me2	H3K36me1
H3K79me1	H3K79me2	H4K20me	H4K20me3	H4K20me2	**H4K20me1**
H3K79me1	H3K79me2	H4K20me	H4K20me3	H4K20me2	**H4K20me1**

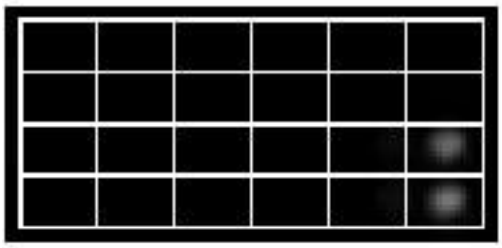

Fig. 2. Dot blot. The specificity of anti-H4K20me1 antibody was tested on a peptide-chip (peptides loaded shown on the left panel) by dot blot assay, which showed a specific reaction with H4K20me1 peptide (right panel) only.

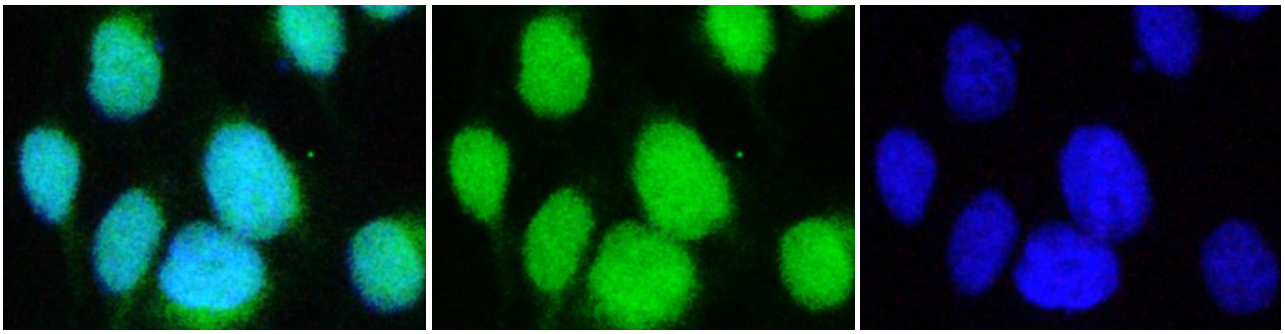

Fig. 3. Immunoflurescence (IF) analysis of H4K20me1 in 293T cells. Green, anti- H4K20me1; Blue, DAPI.

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