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Histone H1.2 Rabbit mAb

Catalog # AP75539

Product Information

Application	WB, IHC-P, IHC-F
Primary Accession	P16403
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	21365

Additional Information

Gene ID	3006
Other Names	H1-2
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A IHC-F~~N/A
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

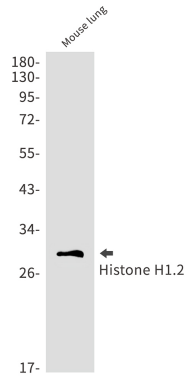
Name	H1-2 (HGNC:4716)
Function	Histone H1 protein binds to linker DNA between nucleosomes forming the macromolecular structure known as the chromatin fiber (PubMed:26581166, PubMed:38530350). Histone H1-2 is required for the condensation of nucleosome chains into higher-order structured fibers (PubMed:38530350). Compared to other histone H1 variants, H1-2 plays an essential role in nucleosome condensation: its absence leads to global chromatin decompaction, which is not observed when depleting other histone H1 variants (PubMed:38530350). Histone H1-2 also acts as a histone reader: specifically recognizes and binds histone H3 trimethylated at 'lys-27' (H3K27me3) (PubMed:26581166). Histones H1 also promote formation of the H3K27me3 mark by the PRC2/EED-EZH2 complex, possibly by facilitating restoration of H3K27me3 post- replication (PubMed:37429872, PubMed:40516528). Together with histone H1-3, histone H1-2 acts as a regulator of splicing, most specifically exon skipping and intron retention events: histone H1-2 has a high affinity for exons and regulates splicing by

	affecting RNA polymerase II (RNAPII) elongation (PubMed:37922872). Also acts as a regulator of individual gene transcription through chromatin remodeling, nucleosome spacing and DNA methylation (PubMed:38530350).
Cellular Location	Nucleus. Nucleus, nucleolus Chromosome. Note=Enriched at the nuclear periphery and colocalizes with compacted DNA (heterochromatin) (PubMed:26581166, PubMed:38530350). Enriched within lamina-associated domains (PubMed:38530350).

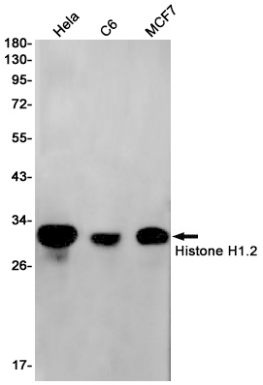
Background

Histones are basic nuclear proteins responsible for 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 replication-dependent histone that is a member of the histone H1 family. Transcripts from this gene lack polyA tails but instead contain a palindromic termination element. This gene is found in the large histone gene cluster on chromosome 6.

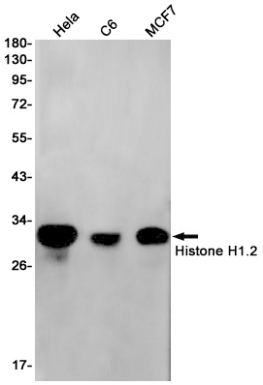
Images



Western blot analysis of Histone H1.2 in mouse lung lysates using Histone H1.2 antibody.



Western blot analysis of Histone H1.2 in Hela, C6, MCF-7 lysates using Histone H1.2 antibody.



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