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macroH2A.1 Antibody

Rabbit mAb
Catalog # AP91563

Product Information

Application	WB, IHC, IF, ICC, IHF
Primary Accession	O75367
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	H2A.y; H2A/y; H2AF12M; H2AFJ; H2afy; Histone H2A.Y; Histone macroH2A1; Histone macroH2A1.1; Histone macroH2A1.2; mH2a;mH2A1;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	39184

Additional Information

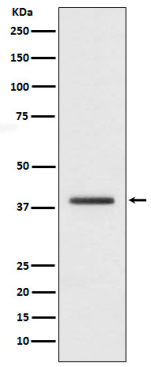
Dilution	WB 1:1000~1:5000 IHC 1:50~1:200 ICC/IF 1:50~1:200
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human macroH2A.1
Description	Involved in stable X chromosome inactivation. Inhibits the binding of transcription factors and interferes with the activity of remodeling SWI/SNF complexes. Inhibits histone acetylation by EP300 and recruits class I HDACs, which induces an hypoacetylated state of chromatin.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

Name	MACROH2A1 (HGNC:4740)
Function	Variant histone H2A which replaces conventional H2A in a subset of nucleosomes where it represses transcription (PubMed:12718888, PubMed:15621527, PubMed:16428466). Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template (PubMed:15897469). Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability (PubMed:15897469). DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling. Involved in stable X chromosome inactivation (PubMed:15897469). Inhibits the binding of transcription factors, including NF-kappa-B, and interferes with the activity of remodeling SWI/SNF complexes (PubMed:12718888, PubMed:16428466). Inhibits histone acetylation by EP300 and recruits class I HDACs, which induces a hypoacetylated state of chromatin (PubMed:16107708, PubMed:16428466).

Cellular Location	Nucleus. Chromosome. Note=Enriched in inactive X chromosome chromatin and in senescence-associated heterochromatin (PubMed:15621527, PubMed:15897469, PubMed:9634239). Recruited to DNA damage sites in an APLF-dependent manner (PubMed:21211722, PubMed:29905837).
Tissue Location	Widely expressed..

Images



Western blot analysis of macroH2A.1 expression in HepG2 cell lysate.

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