Product Name: **KD-Validated MacroH2A.1 Histone Recombinant Rabbit Monoclonal Antibody**

Catalog #: **KVAb01716**

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC,IHC-P
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 39.6kDa

Antigen Information

Gene Name	MACROH2A1
Alternative Names	MACROH2A1; MacroH2A.1 Histone; H2AFY; Medulloblastoma Antigen MU-MB-50.205; H2A Histone Family Member Y; Core Histone Macro-H2A.1; Histone MacroH2A1; Histone H2A.Y; MacroH2A1.2; H2A/Y; MH2A1; H2A Histone Family, Member Y; Histone MacroH2A1.1; Histone MacroH2A1.2; MACROH2A1.1; MACROH2A1.2; H2AF12M; H2A.Y
Gene ID	9555.0
SwissProt ID	O75367
Immunogen	A synthesized peptide derived from human macroH2A.1

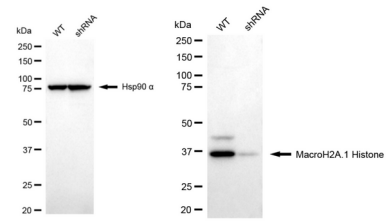
Background

Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. Nucleosomes consist of approximately 146 bp of DNA wrapped around a histone octamer composed of pairs of each of the four core histones (H2A, H2B, H3, and H4). The chromatin fiber is further compacted through the interaction of a linker histone, H1, with the DNA between the nucleosomes to form higher order chromatin structures. This gene encodes a replication-independent histone that is a member of the histone H2A family. It replaces conventional H2A histones in a subset of nucleosomes where it represses transcription and participates in stable X chromosome inactivation. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Oct 2015]

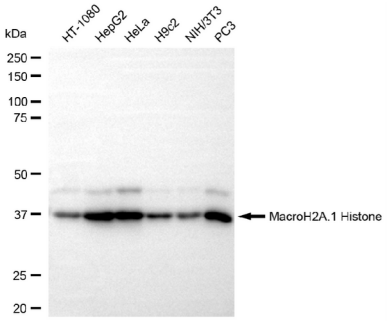
Research Area

Epigenetics and Nuclear Signaling

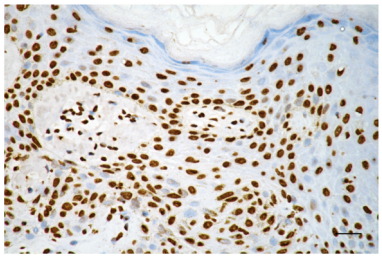
Image Data



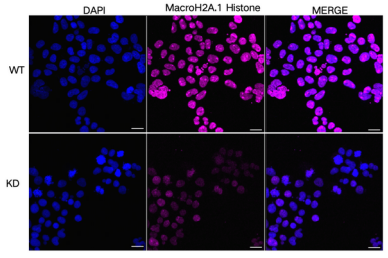
Western blotting analysis using macroH2A.1 histone antibody (KVAb01716). MacroH2A.1 histone expression in wild type (WT) and macroH2A.1 histone (H2AFY) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with macroH2A.1 histone antibody (KVAb01716, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



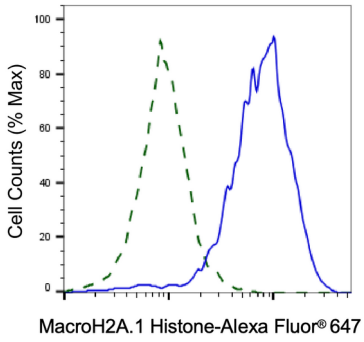
Western blotting analysis using MacroH2A.1 Histone antibody (KVAb01716). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with MacroH2A.1 Histone antibody (KVAb01716, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



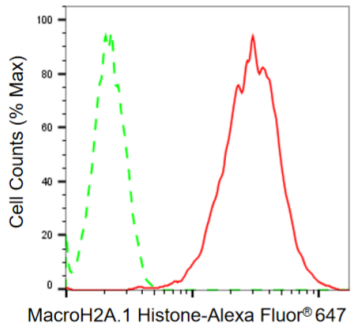
Immunohistochemistry was performed on paraffin-embedded human skin tissue using macroH2A.1 histone antibody (KVAb01716, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.



Immunocytochemical staining of HeLa cells using MacroH2A.1 Histone antibody (KVAb01716, 1:1,000), Top panel: wild-type (WT); Bottom panal: MacroH2A.1 Histone shRNA knockdown (KD). Nuclei were stained blue with DAPI; MacroH2A.1 Histone was stained magenta with Alexa Fluor® 647. Scale bar, 20 µm.



Validation of MacroH2A.1 Histone knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with MacroH2A.1 Histone antibody (KVAb01716, 1:2,000) and analyzed using BD flow cytometer.



Flow cytometric analysis of MacroH2A.1 Histone expression in HAP-1 cells using MacroH2A.1 Histone antibody (KVAb01716, 1:2,000). Green, isotype control; red, MacroH2A.1 Histone.