

KD-Validated Anti-MacroH2A.1 Histone Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI1105

Specification

KD-Validated Anti-MacroH2A.1 Histone Rabbit Monoclonal Antibody - Product Information

Application	WB, FC
Primary Accession	O75367
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 40 kDa, observed, 37 kDa kDa
Gene Name	MACROH2A1
Aliases	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
Immunogen	A synthesized peptide derived from human macroH2A.1

KD-Validated Anti-MacroH2A.1 Histone Rabbit Monoclonal Antibody - Additional Information

Gene ID **9555**

Other Names

Core histone macro-H2A.1, Histone macroH2A1, mH2A1, Histone H2A.y, H2A/y, Medulloblastoma antigen MU-MB-50.205, MACROH2A1 (http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=4740)
[HGNC:4740](http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=4740))

KD-Validated Anti-MacroH2A.1 Histone Rabbit Monoclonal Antibody - 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](http://www.uniprot.org/citations/12718888), PubMed: [15621527](http://www.uniprot.org/citations/15621527), PubMed: [16428466](http://www.uniprot.org/citations/16428466)). Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template (PubMed: [15897469](http://www.uniprot.org/citations/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

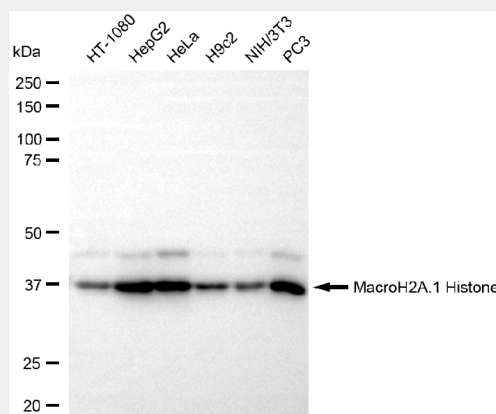
Widely expressed..

KD-Validated Anti-MacroH2A.1 Histone Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

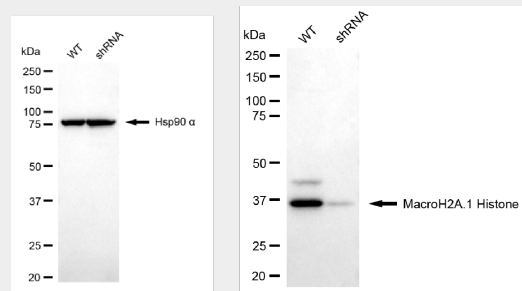
KD-Validated Anti-MacroH2A.1 Histone Rabbit Monoclonal Antibody - Images



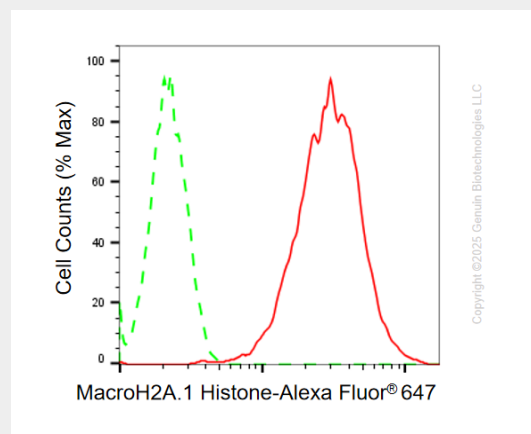
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Western blotting analysis using anti-MacroH2A.1 Histone antibody (Cat#61249). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-MacroH2A.1 Histone antibody (Cat#61249, 1:5,000) and HRP-conjugated goat anti-rabbit

secondary antibody (Cat#201, 1:20,000) respectively. Image was developed using NaQ™ ECL Substrate Kit (Cat#716).



Western blotting analysis using anti-macroH2A.1 histone antibody (Cat#61249). 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 anti-macroH2A.1 histone antibody (Cat#61249, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (Cat#201, 1:20,000) respectively. Image was developed using NaQ™ ECL Substrate Kit (Cat#716).



Flow cytometric analysis of MacroH2A.1 Histone expression in HAP-1 cells using MacroH2A.1 Histone0 α antibody (Cat# 61249, 1:2,000). Green, isotype control; red, MacroH2A.1 Histone.