

Histone H3 Monoclonal antibody

Catalog Number: 68345-1-Ig 59 Publications

Basic Information

Catalog Number:

68345-1-Ig

Concentration:

1000 ug/ml

Source:

Mouse

Isotype:

IgG2b

GenBank Accession Number:

BC066245

GeneID (NCBI):

8350

UNIPROT ID:

P68431

Full Name:

histone cluster 1, H3a

Observed MW:

15-17 kDa

Purification Method:

Protein A purification

CloneNo.:

1A2A3

Recommended Dilutions:

WB: 1:5000-1:50000

IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC: 1:500-1:2000

IF/ICC: 1:500-1:2000

FC (Intra): 0.40 ug per 10⁶ cells in a 100 µl suspension

Applications

Tested Applications:

WB, IHC, IF/ICC, FC (Intra), IP, ELISA

Cited Applications:

WB, IF

Species Specificity:

human, mouse, rat, pig, rabbit, canine, chicken, zebrafish, hamster, dog, wheat

Cited Species:

human, mouse, rat

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB: LNCaP cells, HEK-293 cells, Jurkat cells, K-562 cells, HSC-T6 cells, NIH/3T3 cells, MDCK cells, CHO cells, HeLa cells, chicken brain tissue, zebrafish, wheat whole plant

IP: HeLa cells,

IHC: mouse testis tissue, human colon cancer tissue

IF/ICC: MCF-7 cells, A431 cells, HeLa cells

FC (Intra): HepG2 cells,

Background Information

Histones are small, highly basic proteins that consist of a globular domain with unstructured N- and C-terminal tails protruding from the main structure. Histone H3 is one of the five main histones 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. In addition to their role in DNA compartmentalization, histones also play crucial roles in various biologic processes, including gene expression and regulation, DNA repair, chromatin condensation, cell cycle progression, chromosome segregation, and apoptosis. The ability of histones to regulate chromatin dynamics primarily originates from various posttranslational modifications carried out by histone-modifying enzymes.

Notable Publications

Author	Pubmed ID	Journal	Application
Xuhui Ge	40328251	Neuron	WB
Xiaoyu Chen	40273609	Ecotoxicol Environ Saf	WB
Bo Pang	40238864	Sci Adv	WB

Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

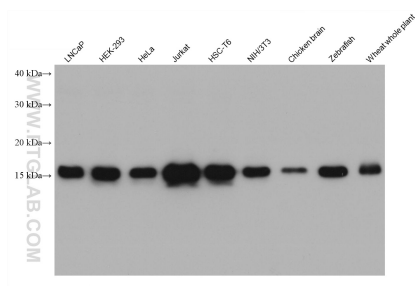
For technical support and original validation data for this product please contact:

T: 4006900926

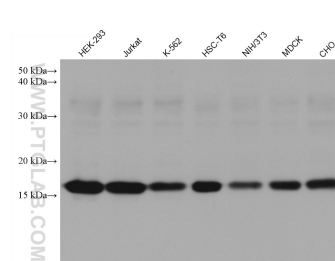
E: Proteintech-CN@ptglab.comW: ptgcn.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

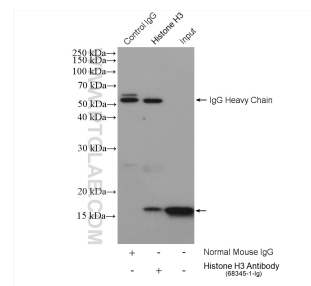
Selected Validation Data



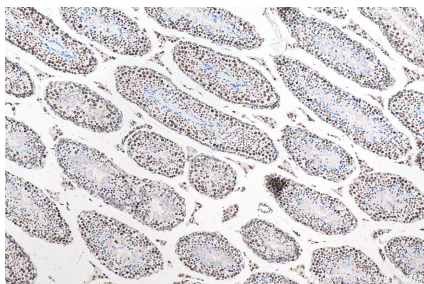
Various lysates were subjected to SDS PAGE followed by western blot with 68345-1-Ig (HIST1H3A antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



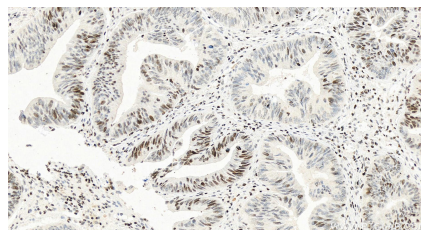
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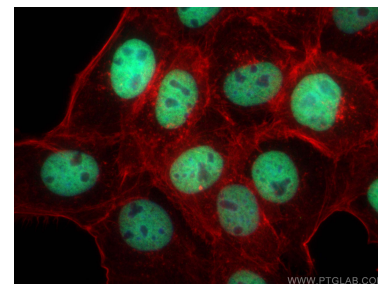
IP result of anti-Histone H3 (IP:68345-1-Ig, 4ug; Detection:68345-1-Ig 1:2000) with HeLa cells lysate 1800 ug.



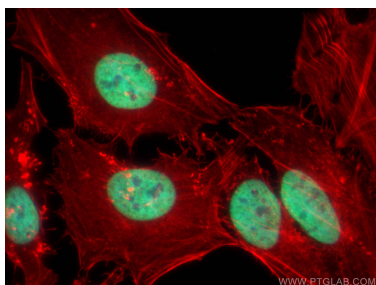
Immunohistochemical analysis of paraffin-embedded mouse testis tissue slide using 68345-1-Ig (HIST1H3A antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



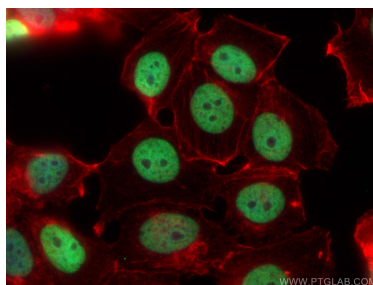
Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 68345-1-Ig (Histone H3 antibody) at dilution of 1:2000 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



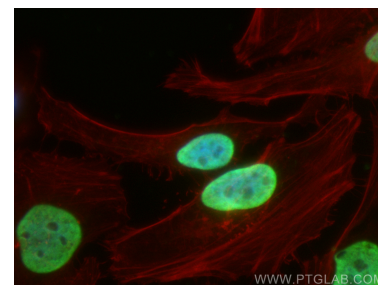
Immunofluorescent analysis of (4% PFA) fixed A431 cells using Histone H3 antibody (68345-1-Ig, Clone: 1A2A3) at dilution of 1:1000 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L), CL594-phalloidin (red).



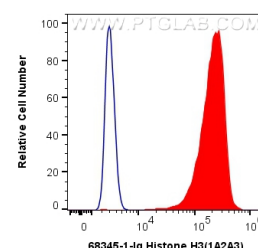
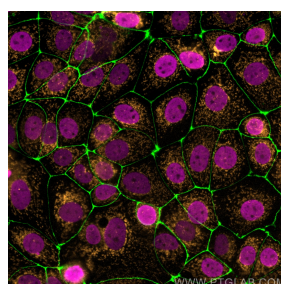
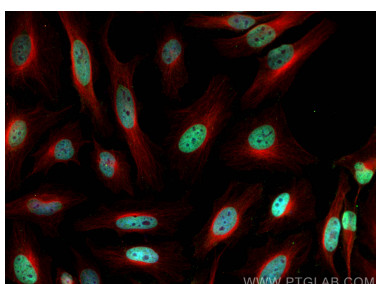
Immunofluorescent analysis of (4% PFA) fixed HeLa cells using Histone H3 antibody (68345-1-Ig, Clone: 1A2A3) at dilution of 1:1000 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L), CL594-phalloidin (red).



Immunofluorescent analysis of (4% PFA) fixed MCF-7 cells using Histone H3 antibody (68345-1-Ig, Clone: 1A2A3) at dilution of 1:1000 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L), CL594-phalloidin (red).



Immunofluorescent analysis of (4% PFA) fixed HeLa cells using Histone H3 antibody (68345-1-Ig, Clone: 1A2A3) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L), CL594-phalloidin (red).



Immunofluorescent analysis of (4% PFA) fixed HeLa cells using Histone H3 antibody (68345-1-Ig, Clone: 1A2A3) at dilution of 1:1000 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L), Alpha Tubulin antibody (11224-1-AP, red).

Immunofluorescent analysis of (4% PFA) fixed MCF-7 cells using Histone H3 antibody (68345-1-Ig, Clone: 1A2A3, labeled with CoraLite647-conjugated AffiniPure F(ab')₂ Fragment Goat Anti-Mouse IgG (H+L), SA00014-10, magenta) at dilution of 1:400 and CoraLite Plus 488-conjugated ZO-1 antibody (CL488-21773, green), CHCHD6 antibody (66597-1-Ig, Clone: 2A11E9, labeled with FlexAble CoraLite Plus 555 Antibody Labeling Kit for Mouse IgG2a, KFA042, orange).

1X10⁶ HepG2 cells were intracellularly stained with 0.4 ug Anti-Human Histone H3 (68345-1-Ig, Clone:1A2A3) and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L) at dilution 1:1000 (red), or 0.4 ug Mouse IgG2b Isotype Control (MPC-11) (65128-1-Ig, Clone: MPC-11) (blue). Cells were fixed and permeabilized with Transcription Factor Staining Buffer Kit (PF00011).