Anti-Symmetric Di-Methyl-Histone H3 (R17) Antibody [PSH27-44]

HA724695

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell
Molecular Wt:	Predicted band size: 15 kDa
Clone number:	PSH27-44

Description: Eukaryotic histones are basic and water soluble nuclear proteins that form hetero-octameric nucleosome particles by wrapping 146 base pairs of DNA in a left-handed super-helical turn sequentially to form chromosomal fibers. Two molecules of each of the four core histones (H2A, H2B, H3 and H4) form the octamer, which is comprised of two H2A-H2B dimers and two H3-H4 dimers, forming two nearly symmetrical halves by tertiary structure. Histones are subject to posttranslational modification by enzymes primarily on their N-terminal tails, but also in their globular domains. Human Histone H3 is subject to trimethylation at Lys 9, a modification that may be necessary for select DNA transactions or chromatin state transitions. Acetylation is generally linked to gene activation. Acetylation on Lys-10 (H3K9ac) impairs methylation at Arg-9 (H3R8me2s). Acetylation on Lys-19 (H3K18ac) and Lys-24 (H3K24ac) favors methylation at Arg-18 (H3R17me). Citrullination at Arg-9 (H3R8ci) and/or Arg-18 (H3R17ci) by PADI4 impairs methylation and represses transcription. Asymmetric dimethylation at Arg-18 (H3R17me2a) by CARM1 is linked to gene activation. Symmetric dimethylation at Arg-9 (H3R8me2s) by PRMT5 is linked to gene repression. Asymmetric dimethylation at Arg-3 (H3R2me2a) by PRMT6 is linked to gene repression and is mutually exclusive with H3 Lys-5 methylation (H3K4me2 and H3K4me3).

Positive control: 293T(Human embryonic kidney cell) cell lysate, NIH/3T3 (Mouse fibroblast) cell lysate, C6 (Rat glioma cell) cell lysate.

Subcellular location: Nucleus.

Database links: SwissProt: P68431 Human | P68433 Mouse | Q6LED0 Rat

Recommended Dilutions:

WB	1:500
IF-Cell	1:50

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

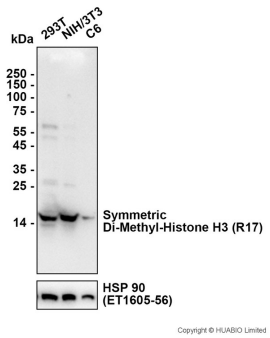

Fig1: Western blot analysis of Symmetric Di-Methyl-Histone H3 (R17) on different lysates with Rabbit anti-Symmetric Di-Methyl-Histone H3 (R17) antibody (HA724695) at 1/500 dilution.

Lane 1: 293T(Human embryonic kidney cell) cell lysate
Lane 2: NIH/3T3 (Mouse fibroblast) cell lysate
Lane 3: C6 (Rat glioma cell) cell lysate

Lysates/proteins at 20 µg/Lane.
Exposure time: 2 minutes; ECL: K1801

Blocking: 5% NFDM/TBST, 1 hour at room temperature
Primary antibody: HA724695, 1/500 in primary antibody dilution buffer (K1803), overnight at 4 °C
Secondary antibody: Goat anti-Rabbit IgG-HRP (HA1001), 1/50,000 in 5% NFDM/TBST, 1 hour at room temperature

Predicted band size: 15 kDa
Observed band size: 15 kDa

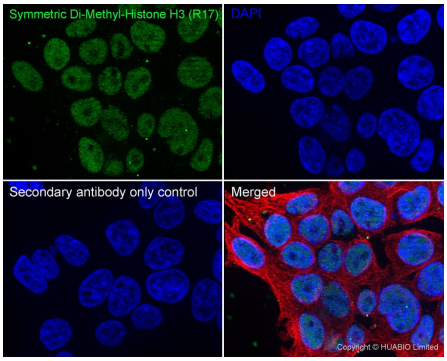

Fig2: Application: Immunocytochemistry (IF-cell)

Species: Human
Sample: 293T (Human embryonic kidney cell)

Fixation: 4% Paraformaldehyde, 15 minutes at room temperature.
Permeabilization: 0.1% Triton X-100, 15 minutes at room temperature.
Blocking: 1% BSA + 10% normal goat serum, 1 hour at room temperature.
Antibody dilution buffer: 1% BSA in PBST.

Primary antibody: HA724695, 1/50, overnight at 4°C.
Secondary antibody: Goat Anti-Rabbit IgG (iFluor™ 488, HA1121), 45 minutes at room temperature.
Counterstain: Beta tubulin (HA601187, Red), 1/100, overnight at 4℃. The nuclear counterstain was DAPI (Blue).

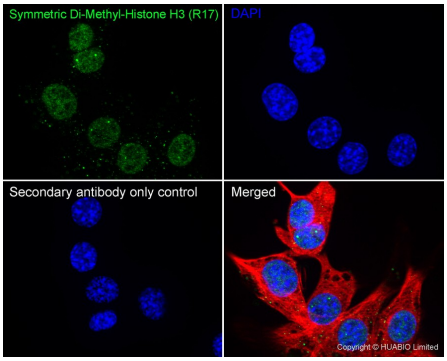

Fig3: Application: Immunocytochemistry (IF-cell)

Species: Mouse
Sample: NIH/3T3 (Mouse fibroblast)

Fixation: 4% Paraformaldehyde, 15 minutes at room temperature.
Permeabilization: 0.1% Triton X-100, 15 minutes at room temperature.
Blocking: 1% BSA + 10% normal goat serum, 1 hour at room temperature.
Antibody dilution buffer: 1% BSA in PBST.

Primary antibody: HA724695, 1/50, overnight at 4°C.
Secondary antibody: Goat Anti-Rabbit IgG (iFluor™ 488, HA1121), 45 minutes at room temperature.
Counterstain: Beta tubulin (HA601187, Red), 1/100, overnight at 4℃. The nuclear counterstain was DAPI (Blue).

Background References

1. Caeiro LD et al. Histone H3 mutations and their impact on genome stability maintenance. Biochem Soc Trans. 2024 Oct
2. Young D et al. The role of histone H3 lysine demethylases in glioblastoma. Cancer Metastasis Rev. 2023 Jun