

Histone cluster 2 H2AA3 (W-25): sc-133655

BACKGROUND

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 fiber. 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. Histone cluster 2 H2AA3, also known as H2A, H2A.2, H2A/O, H2A/q, H2AFO, H2a-615, HIST2H2AA, HIST2H2AA4 or HIST2H2AA3, is a 130 amino acid nuclear protein belonging to the histone H2A family. HIST2H2AA3 is encoded by a gene located on human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome.

REFERENCES

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3. Albig, W. and Doenecke, D. 1997. The human histone gene cluster at the D6S105 locus. *Hum. Genet.* 101: 284-294.
4. Marzluff, W.F., et al. 2002. The human and mouse replication-dependent histone genes. *Genomics* 80: 487-498.
5. Braastad, C.D., et al. 2004. Functional characterization of a human histone gene cluster duplication. *Gene* 342: 35-40.
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7. Zhao, Y., et al. 2008. A TFTC/STAGA module mediates histone H2A and H2B deubiquitination, coactivates nuclear receptors, and counteracts heterochromatin silencing. *Mol. Cell.* 29: 92-101.
8. Pinato, S., et al. 2009. RNF168, a new RING finger, MIU-containing protein that modifies chromatin by ubiquitination of histones H2A and H2AX. *BMC Mol. Biol.* 10: 55.

CHROMOSOMAL LOCATION

Genetic locus: HIST2H2AA3 (human) mapping to 1q21.2; Hist2h2aa1 (mouse) mapping to 3 F2.1.

SOURCE

Histone cluster 2 H2AA3 (W-25) is a Protein A purified rabbit polyclonal antibody raised against synthetic Histone cluster 2 H2AA3 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

Histone cluster 2 H2AA3 (W-25) is recommended for detection of Histone cluster 2 H2AA3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Histone cluster 2 H2AA3 siRNA (h): sc-105506, Histone cluster 2 H2AA1 siRNA (m): sc-146022, Histone cluster 2 H2AA3 shRNA Plasmid (h): sc-105506-SH, Histone cluster 2 H2AA1 shRNA Plasmid (m): sc-146022-SH, Histone cluster 2 H2AA3 shRNA (h) Lentiviral Particles: sc-105506-V and Histone cluster 2 H2AA1 shRNA (m) Lentiviral Particles: sc-146022-V.

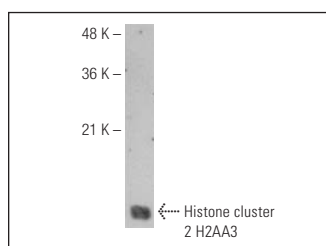
Molecular Weight of Histone cluster 2 H2AA3: 14 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Histone cluster 2 H2AA3 (W-25): sc-133655. Western blot analysis of Histone cluster 2 H2AA3 expression in Jurkat whole cell lysate.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.