

Histone cluster 2 H2AC (X-21): sc-133656

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 H2AC (HIST2H2AC), also known as H2A, H2A-GL101 or H2AFQ, is a 129 amino acid member of the histone H2A family. The gene encoding Histone cluster 2 H2AC is intronless and maps to human chromosome 1q21.2.

REFERENCES

- Collart, D., et al. 1992. A human histone H2B.1 variant gene, located on chromosome 1, utilizes alternative 3' end processing. *J. Cell. Biochem.* 50: 374-385.
- Albig, W. and Doenecke, D. 1997. The human histone gene cluster at the D6S105 locus. *Hum. Genet.* 101: 284-294.
- Marzluff, W.F., et al. 2002. The human and mouse replication-dependent histone genes. *Genomics* 80: 487-498.
- Braastad, C.D., et al. 2004. Functional characterization of a human histone gene cluster duplication. *Gene* 342: 35-40.
- Wang, H., et al. 2004. Role of histone H2A ubiquitination in Polycomb silencing. *Nature* 431: 873-878.
- Zhao, Y., et al. 2008. A TFC/STAGA module mediates histone H2A and H2B deubiquitination, coactivates nuclear receptors, and counteracts heterochromatin silencing. *Mol. Cell.* 29: 92-101.
- Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 602797. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: HIST2H2AC (human) mapping to 1q21.2; Hist2h2ac (mouse) mapping to 3 F2.1.

SOURCE

Histone cluster 2 H2AC (X-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic Histone cluster 2 H2AC 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.

STORAGE

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

APPLICATIONS

Histone cluster 2 H2AC (X-21) is recommended for detection of Histone cluster 2 H2AC 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 H2AC siRNA (h): sc-105509, Histone cluster 2 H2AC siRNA (m): sc-146025, Histone cluster 2 H2AC shRNA Plasmid (h): sc-105509-SH, Histone cluster 2 H2AC shRNA Plasmid (m): sc-146025-SH, Histone cluster 2 H2AC shRNA (h) Lentiviral Particles: sc-105509-V and Histone cluster 2 H2AC shRNA (m) Lentiviral Particles: sc-146025-V.

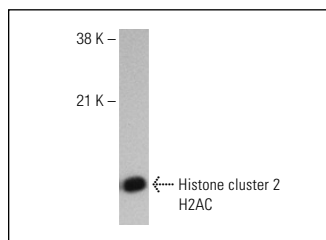
Molecular Weight of Histone cluster 2 H2AC: 14 kDa.

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

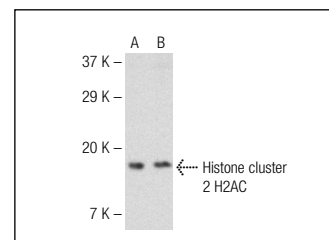
RECOMMENDED SECONDARY REAGENTS

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 H2AC (X-21): sc-133656. Western blot analysis of Histone cluster 2 H2AC expression in Jurkat whole cell lysate.



Histone cluster 2 H2AC (X-21): sc-133656. Western blot analysis of Histone cluster 2 H2AC expression in HL-60 (A) and Y79 (B) nuclear extracts.

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.