

Histone H1 (N-16): sc-34464

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. Over 80% of nucleosomes contain the linker Histone H1, derived from an intronless gene, that interacts with linker DNA between nucleosomes and mediates compaction into higher order chromatin. Histones are subject to posttranslational modification by enzymes primarily on their N-terminal tails, but also in their globular domains. Such modifications include methylation, citrullination, acetylation, phosphorylation, sumoylation, ubiquitination and ADP-ribosylation.

REFERENCES

1. Gunjan, A., et al. 2005. Regulation of histone synthesis and nucleosome assembly. *Biochimie* 87: 625-635.
2. Rupp, R.A., et al. 2005. Gene regulation by Histone H1: new links to DNA methylation. *Cell* 123: 1178-1179.

SOURCE

Histone H1 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Histone H1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-34464 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-34464 X, 200 µg/0.1 ml.

APPLICATIONS

Histone H1 (N-16) is recommended for detection of all Histone H1 isoforms 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Histone H1 (N-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Histone H1: 32-33 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, LNCaP cell lysate: sc-2231 or Jurkat nuclear extract: sc-2132.

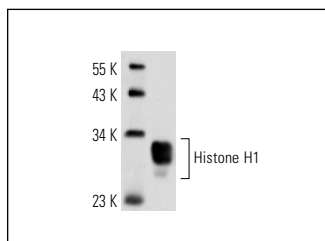
STORAGE

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

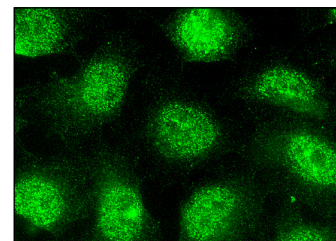
RESEARCH USE

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

DATA



Histone H1 (N-16): sc-34464. Western blot analysis of Histone H1 expression in Jurkat nuclear extract.



Histone H1 (N-16): sc-34464. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Takahashi-Makise, N., et al. 2009. Biscoclaurine alkaloid cepharanthine inhibits the growth of primary effusion lymphoma *in vitro* and *in vivo* and induces apoptosis via suppression of the NFκB pathway. *Int. J. Cancer* 125: 1464-1472.
2. Vinciguerra, M., et al. 2010. Local IGF-1 isoform protects cardiomyocytes from hypertrophic and oxidative stresses via SirT1 activity. *Aging* 2: 43-62.
3. Ling, H., et al. 2010. 6-Shogaol, an active constituent of ginger, inhibits breast cancer cell invasion by reducing matrix metalloproteinase-9 expression via blockade of NFκB activation. *Br. J. Pharmacol.* 161: 1763-1777.
4. Ferenc, P., et al. 2010. Down-regulation of Bcl-2 and Akt induced by combination of photoactivated hypericin and genistein in human breast cancer cells. *J. Photochem. Photobiol. B, Biol.* 98: 25-34.
5. Hang, C.T., et al. 2010. Chromatin regulation by Brg1 underlies heart muscle development and disease. *Nature* 466: 62-67.
6. Ling, H., et al. 2011. Pachymic acid impairs breast cancer cell invasion by suppressing nuclear factor-κB-dependent matrix metalloproteinase-9 expression. *Breast Cancer Res. Treat.* 126: 609-620.
7. Sacková, V., et al. 2011. Enhanced antiproliferative and apoptotic response of HT-29 adenocarcinoma cells to combination of photo-activated hypericin and farnesyltransferase inhibitor manumycin A. *Int. J. Mol. Sci.* 12: 8388-8405
8. Lin, H., et al. 2012. Molecular mechanisms associated with the antidepressant effects of the class I histone deacetylase inhibitor MS-275 in the rat ventrolateral orbital cortex. *Brain Res.* 1447: 119-125.
9. Sciacca, S., et al. 2012. Anti-correlation between longevity gene SirT1 and Notch signaling in ascending aorta biopsies from patients with bicuspid aortic valve disease. *Heart Vessels* 28: 268-275.

PROTOCOLS

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