

Histone H1 (C-17): sc-8616

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. Rupp, R.A., et al. 2005. Gene regulation by histone H1: new links to DNA methylation. *Cell* 123: 1178-1179.
2. Martin, C., et al. 2005. The diverse functions of histone/lysine methylation. *Nat. Rev. Mol. Cell. Biol.* 6: 838-849.
3. Gunjan, A., et al. 2005. Regulation of histone synthesis and nucleosome assembly. *Biochimie* 87: 625-635.
4. Bode, A.M., et al. 2005. Inducible covalent posttranslational modification of histone H3. *Sci. STKE* 2005: re4.

SOURCE

Histone H1 (C-17) is available as either goat (sc-8616) or rabbit (sc-8616-R) affinity purified polyclonal antibody raised against a peptide mapping at the C-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-8616 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Histone H1 (C-17) 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).

Molecular Weight of Histone H1: 32-33 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, A-431 whole cell lysate: sc-2201 or Jurkat whole cell lysate: sc-2204.

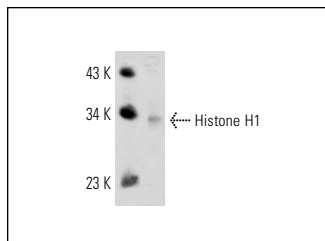
RESEARCH USE

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

STORAGE

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

DATA



Histone H1 (C-17): sc-8616. Western blot analysis of Histone H1 expression in Jurkat nuclear extract.

SELECT PRODUCT CITATIONS

1. Guha, M., et al. 2000. Molecular mechanism of tumor necrosis factor gene expression in monocytic cells via hyperglycemia-induced oxidant stress-dependent and independent pathways. *J. Biol. Chem.* 275: 17728-17739.
2. Guo, W., et al. 2008. Avenanthramides, polyphenols from oats, inhibit IL-1β-induced NFκB activation in endothelial cells. *Free Radic. Biol. Med.* 44: 415-429.
3. Kim, J., et al. 2009. Role of cytosolic NADP⁺-dependent isocitrate dehydrogenase in ischemia-reperfusion injury in mouse kidney. *Am. J. Physiol. Renal Physiol.* 296: F622-F633.
4. Li, J., et al. 2009. Association of constitutive nuclear factor-κB activation with aggressive aspects and poor prognosis in cervical cancer. *Int. J. Gynecol. Cancer* 19: 1421-1426.
5. Nomoto, M., et al. 2009. Bile acid-induced elevated oxidative stress in the absence of farnesoid X receptor. *Biol. Pharm. Bull.* 32: 172-178.
6. Kim, J.D., et al. 2011. A novel mouse PKCδ splice variant, PKCδIX, inhibits etoposide-induced apoptosis. *Biochem. Biophys. Res. Commun.* 410: 177-182.
7. Galizzi, G., et al. 2011. Different early ER-stress responses in the CLN8(mnd) mouse model of neuronal ceroid lipofuscinosis. *Neurosci. Lett.* 488: 258-262.
8. Canterini, S., et al. 2013. Multiple TSC22D4 iso-/phospho-glycoforms display idiosyncratic subcellular localizations and interacting protein partners. *FEBS J.* 280: 1320-1329.



Try **Histone H1 (H-2): sc-393358** or **Histone H1 (AE-4): sc-8030**, our highly recommended monoclonal alternatives to Histone H1 (C-17). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Histone H1 (H-2): sc-393358**.