

p-Histone H3 (117C826): sc-52942

BACKGROUND

In eukaryotes, DNA is wrapped around histone octamers to form the basic unit of chromatin structure. The octamer is composed of Histones H2A, H2B, H3 and H4, and it associates with approximately 200 base pairs of DNA to form the nucleosome. The association of DNA with histones results in dense packing of chromatin, which restricts proteins involved in gene transcription from binding to DNA. Histone H3, the core protein of the nucleosome, becomes phosphorylated at the end of prophase. The two major sites of phosphorylation are the mitosis-specific site Ser 10 and Ser 28, both of which are extensively phosphorylated in DNA-bound forms of Histone H3 and in nucleosomal Histone H3. The nucleosome structure of Histone H3 promotes N-terminal phosphorylation *in vitro*.

REFERENCES

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3. Shibata, K., et al. 1990. Mitosis-specific Histone H3 phosphorylation *in vitro* in nucleosome structures. *Eur. J. Biochem.* 192: 87-93.
4. Wolffe, A.P. 1997. Histone H1. *Int. J. Biochem. Cell Biol.* 29: 1463-1466.
5. Cobb, J., et al. 1999. Meiotic events at the centromeric heterochromatin: Histone H3 phosphorylation, topoisomerase II α localization and chromosome condensation. *Chromosoma* 108: 412-425.
6. Zhong, S.P., et al. 2000. ERKs and p38 kinases mediate ultraviolet B-induced phosphorylation of Histone H3 at Serine 10. *J. Biol. Chem.* 275: 20980-20984.
7. Choi, H.S., et al. 2005. Phosphorylation of histone H3 at serine 10 is indispensable for neoplastic cell transformation. *Cancer. Res.* 65: 5818-5827.

CHROMOSOMAL LOCATION

Genetic locus: Genetic locus: HIST1H3A (human) mapping to 6p22.2; Hist1h3a (mouse) mapping to 13 A3.1.

SOURCE

p-Histone H3 (117C826) is a mouse monoclonal antibody raised against a short amino acid sequence containing phosphorylated raised against synthetic p-Histone H3 containing phosphorylated serine at position 28 of human origin of Histone H3 of origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

p-Histone H3 (117C826) is recommended for detection of Ser 28 phosphorylated Histone H3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Molecular Weight of p-Histone H3: 15 kDa.

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.



See **p-Histone H3 (C-2): sc-374669** for p-Histone H3 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647.