SANTA CRUZ BIOTECHNOLOGY, INC.

Histone H2B (1-126): sc-4333 WB



BACKGROUND

In eukaryotes, DNA is wrapped around histone octamers to form the basic unit of chromatin structure (1,2). 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 (2). The association of DNA with histones results in dense packing of chromatin, which restricts proteins involved in gene transcription from binding to DNA (3). Histone H1 is required for the condensation of nucleosome chains into higher order structures (4). Phosporylation of histone H1 is thought be involved in this process, although the exact nature of this role has yet to be elucidated (5,6). Evidence suggests that histone H1 is a part of a general repressor mechanism for stable repression of transcription, but it can also activate transcription of specific genes (7,8).

SOURCE

Histone H2B (1-126) is expressed in *E. coli* as a 41 kDa tagged fusion protein corresponding to amino acids 1-126 of Histone H2B of human origin.

PRODUCT

Histone H2B (1-126) is purified from bacterial lysates (>98%) by column chromotography; supplied as 10 μ g in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

Histone H2B (1-126) is suitable as a Western blotting control for sc-8650, sc-8651 and sc-10808.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

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

REFERENCES

- Doenecke, D., Tonjes, R., and Kress, H. 1988. The H1 and core histone subtypes: differential gene expression and varied primary structures. Adv. Enzyme Regul. 27: 107-120.
- 2. Lewin, B. 1990. GENES IV. Oxford: Oxford University Press, 411-412.
- 3. Wolffe, A.P. 1997. Histone H1. Int. J. Biochem. Cell Biol. 29: 1463-1466.
- Nilsson, P., Mannermaa, R.M., Oikarinen, J., and Grundstrom, T. 1992. DNA binding of histone H1 is modulated by nucleotides. FEBS Letters 313: 67-70.
- 5. Roth, S.Y. and Allis, C.D. 1992. Chromatin condensation: does histone H1 dephosphorylation play a role? Trends Biochem. 17: 93-98.
- Hohmann, P. 1983. Phosphorylation of H1 histones. Mol. Cell Biochem. 57: 81-92.
- Gao, B., Jaffe, H., and Kunos, G. 1998. Histone H1 isoforms purified from rat liver bind nonspecifically to the nuclear factor 1 recognition sequence and serve as generalized transcriptional repressors. Mol. Cell Biochem. 178: 187-196.
- Wolffe, A.P., Khochbin, S., and Dimitrov, S. 1997. What do linker histones do in chromatin? Bioessays 19: 249-255.

For product citations, please visit our website at www.scbt.com