



Histone cluster 1 H3E (h): 293T Lysate: sc-116365

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 1 H3E is a member of the Histone H3 family and is encoded by a gene located in the large histone gene cluster on chromosome 6. Histone cluster 1 H3E undergoes posttranslational modifications, including the phosphorylation of Ser 10.

REFERENCES

1. Albig, W., Kardalinos, E., Drabent, B., Zimmer, A. and Doenecke, D. 1991. Isolation and characterization of two human H1 histone genes within clusters of core histone genes. *Genomics* 10: 940-948.
2. Albig, W., Kioschis, P., Poustka, A., Meergans, K. and Doenecke, D. 1997. Human histone gene organization: nonregular arrangement within a large cluster. *Genomics* 40: 314-322.
3. Albig, W. and Doenecke, D. 1997. The human histone gene cluster at the D6S105 locus. *Hum. Genet.* 101: 284-294.
4. Goto, H., Tomono, Y., Ajiro, K., Kosako, H., Fujita, M., Sakurai, M., Okawa, K., Iwamatsu, A., Okigaki, T., Takahashi, T. and Inagaki, M. 1999. Identification of a novel phosphorylation site on Histone H3 coupled with mitotic chromosome condensation. *J. Biol. Chem.* 274: 25543-25549.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602813. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Wang, H., Zhai, L., Xu, J., Joo, H.Y., Jackson, S., Erdjument-Bromage, H., Tempst, P., Xiong, Y. and Zhang, Y. 2006. Histone H3 and H4 ubiquitylation by the CUL-4-DDB-ROC1 ubiquitin ligase facilitates cellular response to DNA damage. *Mol. Cell* 22: 383-394.
7. Beck, H.C., Nielsen, E.C., Matthiesen, R., Jensen, L.H., Sehested, M., Finn, P., Grauslund, M., Hansen, A.M. and Jensen, O.N. 2006. Quantitative proteomic analysis of post-translational modifications of human histones. *Mol. Cell. Proteomics* 5: 1314-1325.
8. Morris, S.A., Rao, B., Garcia, B.A., Hake, S.B., Diaz, R.L., Shabanowitz, J., Hunt, D.F., Allis, C.D., Lieb, J.D. and Strahl, B.D. 2007. Identification of Histone H3 lysine 36 acetylation as a highly conserved histone modification. *J. Biol. Chem.* 282: 7632-7640.
9. Garcia, B.A., Hake, S.B., Diaz, R.L., Kauer, M., Morris, S.A., Recht, J., Shabanowitz, J., Mishra, N., Strahl, B.D., Allis, C.D. and Hunt, D.F. 2007. Organismal differences in post-translational modifications in Histones H3 and H4. *J. Biol. Chem.* 282: 7641-7655.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: HIST1H3E (human) mapping to 6p22.2.

PRODUCT

Histone cluster 1 H3E (h): 293T Lysate represents a lysate of human Histone cluster 1 H3E transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Histone cluster 1 H3E (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Histone cluster 1 H3E antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

PROTOCOLS

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