

p-Histone cluster 1 H3E (Ser 10): sc-101697

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 H3 histone 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

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- Albig, W., et al. 1997. Human histone gene organization: nonregular arrangement within a large cluster. *Genomics* 40: 314-322.
- Albig, W. and Doenecke, D. 1997. The human histone gene cluster at the D6S105 locus. *Hum. Genet.* 101: 284-294.
- Goto, H., et al. 1999. Identification of a novel phosphorylation site on Histone H3 coupled with mitotic chromosome condensation. *J. Biol. Chem.* 274: 25543-25549.
- 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/>
- Wang, H., et al. 2006. Histone H3 and H4 ubiquitylation by the CUL4-DDB-ROC1 ubiquitin ligase facilitates cellular response to DNA damage. *Mol. Cell* 22: 383-394.
- Beck, H.C., et al. 2006. Quantitative proteomic analysis of post-translational modifications of human histones. *Mol. Cell Proteomics* 5: 1314-1325.

CHROMOSOMAL LOCATION

Genetic locus: HIST1H3E (human) mapping to 6p22.1; Hist1h3e (mouse) mapping to 13 A3.1.

SOURCE

p-Histone cluster 1 H3E (Ser 10) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 10 of Histone cluster 1 H3E of human origin.

PRODUCT

Each vial contains 100 µg IgG 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 cluster 1 H3E (Ser 10) is recommended for detection of Ser 10 phosphorylated Histone cluster 1 H3E of human and mouse origin and correspondingly phosphorylated Ser 11 of rat 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 and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Histone cluster 1 H3E siRNA (h): sc-105490, Histone cluster 1 H3E siRNA (m): sc-146007, Histone cluster 1 H3E shRNA Plasmid (h): sc-105490-SH, Histone cluster 1 H3E shRNA Plasmid (m): sc-146007-SH, Histone cluster 1 H3E shRNA (h) Lentiviral Particles: sc-105490-V and Histone cluster 1 H3E shRNA (m) Lentiviral Particles: sc-146007-V.

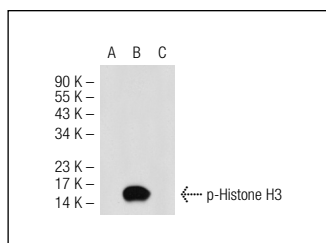
Molecular Weight of p-Histone cluster 1 H3E: 15 kDa.

Positive Controls: HeLa + Calyculin A cell lysate: sc-2271, HeLa whole cell lysate: sc-2200 or EGF + Calyculin A treated HeLa whole cell lysates.

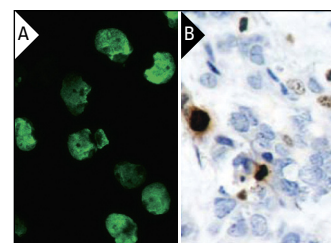
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-Histone cluster 1 H3E (Ser 10): sc-101697. Western blot analysis of Histone cluster 1 H3E phosphorylation in untreated (A), calyculin A treated (B) and calyculin A and lambda protein phosphatase (sc-200312A) treated (C) HeLa whole cell lysates.



p-Histone cluster 1 H3E (Ser 10): sc-101697. Immunofluorescence staining of methanol-fixed A-431 cells (A) and immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue (B) showing nuclear localization.

RESEARCH USE

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