SANTA CRUZ BIOTECHNOLOGY, INC.

Histone $H1^0$ (27): sc-56694

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Histone $H1^0$ (H1 histone family, member 0) is a lysine-rich member of the H1 family of linker histones. The H1 family of proteins interacts with linker DNA between nucleosomes and mediates compaction into higher order chromatin. Histone $H1^0$ is a unique variant, considered a replacement linker histone, which is expressed and incorporated into chromatin in the absence of DNA replication. In contrast, the majority of somatic H1 histones are replication-dependent variants found in proliferating cells. Histone $H1^0$ is expressed in cells that are in the terminal stages of differentiation or that have low rates of cell division. Unlike other differentiation-specific linker histones which demonstrate tissue and species-specific expression, Histone $H1^0$ is widely expressed in many tissues in most vertebrates. Histone $H1^0$ is derived from an intronless gene, H1F0, which has been mapped to chromosome human 22q13.1. 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.

CHROMOSOMAL LOCATION

Genetic locus: H1F0 (human) mapping to 22q13.1; H1f0 (mouse) mapping to 15 E1.

SOURCE

Histone $H1^0$ (27) is a mouse monoclonal antibody raised against amino acids 24-30 of Histone $H1^0$ of bovine origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain 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

Histone $H1^0$ (27) is recommended for detection of Histone $H1^0$ of mouse, rat, human, bovine, *Xenopus* and sea urchin 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Histone $H1^0$ siRNA (h): sc-62460, Histone $H1^0$ siRNA (m): sc-62461, Histone $H1^0$ shRNA Plasmid (h): sc-62460-SH, Histone $H1^0$ shRNA Plasmid (m): sc-62461-SH, Histone $H1^0$ shRNA (h) Lentiviral Particles: sc-62460-V and Histone $H1^0$ shRNA (m) Lentiviral Particles: sc-62461-V.

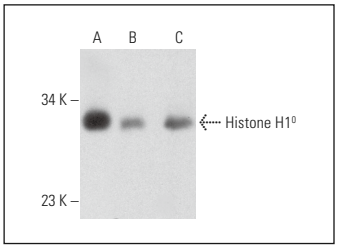
Molecular Weight of Histone $H1^0$: 32 kDa.

Positive Controls: Histone $H1^0$ (h): 293 Lysate: sc-110768, RBL-1 whole cell lysate: sc-364790 or Sol8 cell lysate: sc-2249.

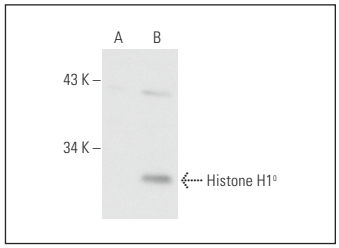
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Histone $H1^0$ (27): sc-56694. Western blot analysis of Histone $H1^0$ expression in Sol8 (**A**), RBL-1 (**B**) and L8 (**C**) whole cell lysates.



Histone $H1^0$ (27): sc-56694. Western blot analysis of Histone $H1^0$ expression in non-transfected: sc-110760 (**A**) and human Histone $H1^0$ transfected: sc-110768 (**B**) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kuo, C.Y., et al. 2008. HBx inhibits the growth of CCL13-HBX-stable cells via the GSK-3β/β-catenin cascade. Intervirology 51: 130-136.
2. Li, X., et al. 2010. Proteomic characterization of an isolated fraction of synthetic proteasome inhibitor (PSI)-induced inclusions in PC12 cells might offer clues to aggresomes as a cellular defensive response against proteasome inhibition by PSI. BMC Neurosci. 11: 95.
3. Miniard, A.C., et al. 2010. Nucleolin binds to a subset of selenoprotein mRNAs and regulates their expression. Nucleic Acids Res. 38: 4807-4820.

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.