

Histone H1⁰ (G-12): sc-54830

BACKGROUND

Histone H1⁰ (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 H1⁰ 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 H1⁰ 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 H1⁰ is widely expressed in many tissues in most vertebrates. Histone H1⁰ is derived from an intronless gene, H1F0, which has been mapped to human chromosome 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.

REFERENCES

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2. Albig, W., Drabent, B., Kunz, J., Kalff-Suske, M., Grzeschik, K.H. and Doenecke, D. 1993. All known human H1 histone genes except the H1⁰ gene are clustered on chromosome 6. *Genomics* 16: 649-654.
3. Gorka, C., Lawrence, J.J. and Khochbin, S. 1995. Variation of H1⁰ content throughout the cell cycle in regenerating rat liver. *Exp. Cell Res.* 217: 528-533.
4. Baxevanis, A.D. and Landsman, D. 1996. Histone sequence database: a compilation of highly-conserved nucleoprotein sequences. *Nucleic Acids Res.* 24: 245-247.
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6. Lindner, H., Sarg, B., Hoernagl, B. and Helliger, W. 1998. The microheterogeneity of the mammalian H1⁰ histone. Evidence for an age-dependent deamidation. *J. Biol. Chem.* 273: 13324-13330.

CHROMOSOMAL LOCATION

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

STORAGE

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

PROTOCOLS

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

SOURCE

Histone H1⁰ (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Histone H1⁰ of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-54830 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Histone H1⁰ (G-12) is recommended for detection of Histone H1⁰ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Histone H1⁰ siRNA (h): sc-62460, Histone H1⁰ siRNA (m): sc-62461, Histone H10 shRNA Plasmid (h): sc-62460-SH, Histone H1⁰ shRNA Plasmid (m): sc-62461-SH, Histone H1⁰ shRNA (h) Lentiviral Particles: sc-62460-V and Histone H1⁰ shRNA (m) Lentiviral Particles: sc-62461-V.

Molecular Weight of Histone H1⁰: 32 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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