

H2BFWT (N-12): sc-168051

BACKGROUND

Eukaryotic histones are water soluble, basic 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. H2BFWT (H2B histone family member W testis-specific) is a 175 amino acid nuclear membrane histone that belongs to the histone H2B family. In contrast to most H2B histones, H2BFWT does not contain the conserved C-terminal residue involved in monoubiquitination, but is structurally indistinguishable from conventional H2B histones. Also varying from other H2B histones, H2BFWT does not participate in the recruitment of chromosome condensation factors or in the assembly of mitotic chromosomes. Expressed in testis, H2BFWT is present in sperm cells and may be essential to telomere function.

REFERENCES

1. Chadwick, B.P. and Willard, H.F. 2001. Histone H2A variants and the inactive X chromosome: identification of a second macroH2A variant. *Hum. Mol. Genet.* 10: 1101-1113.
2. Churikov, D., et al. 2004. Novel human testis-specific histone H2B encoded by the interrupted gene on the X chromosome. *Genomics* 84: 745-756.
3. Ross, M.T., et al. 2005. The DNA sequence of the human X chromosome. *Nature* 434: 325-337.
4. Doyen, C.M., et al. 2006. Mechanism of polymerase II transcription repression by the histone variant macroH2A. *Mol. Cell. Biol.* 26: 1156-1164.
5. Boulard, M., et al. 2006. The NH₂ tail of the novel histone variant H2BFWT exhibits properties distinct from conventional H2B with respect to the assembly of mitotic chromosomes. *Mol. Cell. Biol.* 26: 1518-1526.
6. Lee, J., et al. 2009. Functional polymorphism in H2BFWT-5'UTR is associated with susceptibility to male infertility. *J. Cell. Mol. Med.* 13: 1942-1951.

CHROMOSOMAL LOCATION

Genetic locus: H2BFWT (human) mapping to Xq22.2.

SOURCE

H2BFWT (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of H2BFWT of human 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-168051 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

H2BFWT (N-12) is recommended for detection of H2BFWT of 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 H2BFWT siRNA (h): sc-91226, H2BFWT shRNA Plasmid (h): sc-91226-SH and H2BFWT shRNA (h) Lentiviral Particles: sc-91226-V.

Molecular Weight of H2BFWT: 20 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.

PROTOCOLS

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