SANTA CRUZ BIOTECHNOLOGY, INC.

Histone H2A.Z/H2A.F/Z (N-15): sc-54388

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Histone H2A.Z/H2A.F/Z (H2A/Z) is a 128 amino acid protein encoded by the human gene H2AFZ. Eukaryotic histones are basic and water soluble nuclear proteins that form hetero-octameric nucleosome particles by wrapping 146 base pairs of DNA sequentially in a left-handed super-helical turn 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, creating two nearly symmetrical halves by tertiary structure. H2A.Z/H2A.F/Z is a variant Histone H2A which replaces conventional H2A in a subset of nucleosomes. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in tran-scription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of posttranslational modifications of histones, also called histone code, and nucleosome remodeling. H2A.Z/H2A.F/Z may be involved in the formation of constitutive heterochromatin and may be required for chromosome segregation during cell division.

REFERENCES

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5. Bustin, M., Catez, F. and Lim, J.H. 2005. The dynamics of Histone H1 function in chromatin. Mol. Cell 17: 617-620.
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CHROMOSOMAL LOCATION

Genetic locus: H2AFZ (human) mapping to 4q23, H2AFV (human) mapping to 7p13; H2afz (mouse) mapping to 3 G3, H2afv (mouse) mapping to 11 A1.

STORAGE

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

SOURCE

Histone H2A.Z/H2A.F/Z (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of histone H2A.Z 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-54388 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-54388 X, 200 µg/0.1 ml.

APPLICATIONS

Histone H2A.Z/H2A.F/Z (N-15) is recommended for detection of histone H2A.Z and histone H2A.F/Z 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).

Histone H2A.Z/H2A.F/Z (N-15) is also recommended for detection of histone H2A.Z and histone H2A.F/Z in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Histone H2A.Z siRNA (h): sc-62462, Histone H2A.Z siRNA (m): sc-62463, Histone H2A.Z shRNA Plasmid (h): sc-62462-SH, Histone H2A.Z shRNA Plasmid (m): sc-62463-SH, Histone H2A.Z shRNA (h) Lentiviral Particles: sc-62462-V and Histone H2A.Z shRNA (m) Lentiviral Particles: sc-62463-V.

Histone H2A.Z/H2A.F/Z (N-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Histone H2A.Z/H2A.F/Z: 14 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or mouse placenta extract: sc-364247.

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.