SANTA CRUZ BIOTECHNOLOGY, INC.

# HMG-14 (N-15): sc-19074

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

The high-mobility group (HMG) proteins 14 and 17 are abundant chromosomal proteins that bind to nucleosomes and enhance transcription. HMG-14 and HMG-17 also function as architectural elements, which alter the structure of the chromatin fiber and enhance transcription from chromatin templates. HMG-14/17 proteins modify the nucleosomal organization of the 30 nm chromatin fiber and mediate the unfolding of the higher order chromatin structure, thereby facilitating access to the underlying DNA sequence. Clustering of architectural elements, such as HMG proteins and linker histone subtypes, into distinct domains may lead to structural and functional heterogeneity along the chromatin fiber. In addition, HMG-14 and HMG-17 have been identified as constitutive components of mouse oocyte and embryonic chromatin that establish a link between the structure of embryonic chromatin and the normal progression of embryonic development.

## REFERENCES


1. Bustin, M., Trieschmann, L. and Postnikov, Y.V. 1995. The HMG-14/-17 chromosomal protein family: architectural elements that enhance transcription from chromatin templates. Semin. Cell Biol. 6: 247-255.
2. Postnikov, Y.V., Herrera, J.E., Hock, R., Scheer, U. and Bustin, M. 1997. Clusters of nucleosomes containing chromosomal protein HMG-17 in chromatin. J. Mol. Biol. 274: 454-465.
3. Hock, R., Wilde, F., Scheer, U. and Bustin, M. 1998. Dynamic relocation of chromosomal protein HMG-17 in the nucleus is dependent on transcriptional activity. EMBO J. 17: 6992-7001.
4. Hock, R., Scheer, U. and Bustin, M. 1998. Chromosomal proteins HMG-14 and HMG-17 are released from mitotic chromosomes and imported into the nucleus by active transport. J. Cell Biol. 143: 1427-1436.
5. Mohamed, O.A., Bustin, M. and Clarke, H.J. 2001. High-mobility group proteins 14 and 17 maintain the timing of early embryonic development in the mouse. Dev. Biol. 229: 237-249.


## CHROMOSOMAL LOCATION

Genetic locus: HMGN1 (human) mapping to 21q22.2; Hmgn1 (mouse) mapping to 16 C4.

## SOURCE

HMG-14 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of HMG-14 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-19074 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-19074 X, 200 µg/0.1 ml.

## APPLICATIONS

HMG-14 (N-15) is recommended for detection of HMG-14 of human and, to a lesser extent, mouse and rat 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 HMG-14 siRNA (h): sc-37986, HMG-14 siRNA (m): sc-37987, HMG-14 shRNA Plasmid (h): sc-37986-SH, HMG-14 shRNA Plasmid (m): sc-37987-SH, HMG-14 shRNA (h) Lentiviral Particles: sc-37986-V and HMG-14 shRNA (m) Lentiviral Particles: sc-37987-V.

HMG-14 (N-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

## 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.

## SELECT PRODUCT CITATIONS


1. Lefèvre, P.L., Palin, M.F., Beaudry, D., Dobias-Goff, M., Desmarais, J.A., Llerena V, E.M. and Murphy, B.D. 2011. Uterine signaling at the emergence of the embryo from obligate diapause. Am. J. Physiol. Endocrinol. Metab. 300: E800-E808.


## 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.

## PROTOCOLS

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