SANTA CRUZ BIOTECHNOLOGY, INC.

HMG-1 (h): 293 Lysate: sc-110487

BACKGROUND

High mobility group (HMG) proteins 1 and 2 are ubiquitous non-histone components of chromatin. Research suggests that the binding of HMG proteins to DNA induces alterations in the DNA architecture, including DNA bending and unwinding of the helix. HMG proteins synergize with Oct-2, ATF-2, c-Jun and members of the NFκB family to activate transcription. Additional studies indicate that phosphorylation of HMG protein is required to stimulate the transcriptional activity of the protein. Human HMG-1 and HMG-2 each contain two DNA-binding domains, termed HMG boxes. HMG proteins bind single-stranded DNA but induce conformational changes in double-stranded DNA alone.

REFERENCES

1. Wen, L., Huang, J.K., Johnson, B.H. and Reeck, G.R. 1989. A human placental cDNA clone that encodes non-histone chromosomal protein HMG-1. Nucleic Acids Res. 17: 1197-1214.
2. Bustin, M., Lehn, D.A. and Landsman, D. 1990. Structural features of the HMG chromosomal proteins and their genes. Biochim. Biophys. Acta 1049: 231-243.
3. Shirakawa, H. and Yoshida, M. 1992. Structure of a gene coding for human HMG-2 protein. J. Biol. Chem. 267: 6641-6635.
4. Nissen, M.S. and Reeves, R. 1995. Changes in superhelicity are introduced into closed circular DNA by binding of high mobility group protein I/Y. J. Biol. Chem. 270: 4355-4360.
5. Wang, D.Z., Ray, P. and Boothby, M. 1995. Interleukin-4-inducible phosphorylation of HMG-1(Y) is inhibited by Rapamycin. J. Biol. Chem. 270: 22924-22932.
6. Falvo, J.V., Thanos, D. and Maniatis, T. 1995. Reversal of intrinsic DNA bends in the IFN-β gene enhancer by transcription factors and the architectural protein HMG-1(Y). Cell 83: 1101-1111.
7. Wood, L.D., Farmer, A.A. and Richmond, A. 1995. HMG-I(Y) and Sp1 in addition to NFκB regulate transcription of the MGSA/GRO α gene. Nucleic Acids Res. 23: 4210-4219.
8. Love, J.J., Li, X., Case, D.A., Giese, K., Grosschedl, R. and Wright, P.E. 1995. Structural basis for DNA bending by the architectural transcription factor LEF-1. Nature 376: 791-795.

CHROMOSOMAL LOCATION

Genetic locus: HMGB1 (human) mapping to 13q12.3.

PRODUCT

HMG-1 (h): 293 Lysate represents a lysate of human HMG-1 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

HMG-1 (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive HMG-1 antibodies. Recommended use: 10-20 µl per lane.

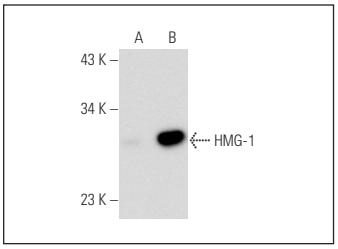
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-tranfected 293 cells.

HMG-1 (HAP46.5): sc-56698 is recommended as a positive control antibody for Western Blot analysis of enhanced human HMG-1 expression in HMG-1 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

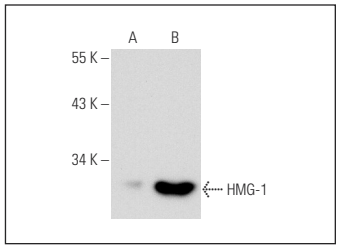
RECOMMENDED SUPPORT REAGENTS

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.

DATA



HMG-1 (HAP46.5): sc-56698. Western blot analysis of HMG-1 expression in non-transfected: sc-110760 (**A**) and human HMG-1 transfected: sc-110487 (**B**) 293 whole cell lysates.



HMG-1 (W-18): sc-74085. Western blot analysis of HMG-1 expression in non-transfected: sc-110760 (**A**) and human HMG-1 transfected: sc-110487 (**B**) 293 whole cell lysates.

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.