SANTA CRUZ BIOTECHNOLOGY, INC.

HMG-2 (68.32): sc-101067

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

High mobility group (HMG) proteins 1 and 2 are ubiquitous non-histone components of chromatin. Evidence 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, members of the NFκB family, ATF-2 and c-Jun to activate transcription. Other studies indicate that phosphorylation of HMG protein is required to stimulate the transcriptional activity of the protein. Human HMG-1 and HMG-2 both contain two DNA-binding domains, termed HMG boxes. HMG proteins bind single-stranded DNA but induce conformational changes in double-stranded DNA alone.

REFERENCES

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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-I/HMG-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-I/HMG-Y. Cell 83: 1101-1111.
7. Wood, L.D., Farmer, A.A. and Richmond, A. 1995. HMGI (Y) and Sp1 in addition to NFκB regulate transcription of the MGSA/GRO α gene. Nucleic Acids Res. 23: 4210-4219.
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CHROMOSOMAL LOCATION

Genetic locus: HMGB2 (human) mapping to 4q34.1; Hmgb2 (mouse) mapping to 8 B2.

SOURCE

HMG-2 (68.32) is a mouse monoclonal antibody raised against recombinant HMG-2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HMG-2 (68.32) is recommended for detection of HMG-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HMG-2 siRNA (h): sc-37984, HMG-2 siRNA (m): sc-37985, HMG-2 shRNA Plasmid (h): sc-37984-SH, HMG-2 shRNA Plasmid (m): sc-37985-SH, HMG-2 shRNA (h) Lentiviral Particles: sc-37984-V and HMG-2 shRNA (m) Lentiviral Particles: sc-37985-V.

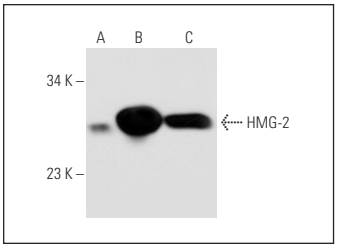
Molecular Weight of HMG-2: 26 kDa.

Positive Controls: HMG-2 (h2): 293T Lysate: sc-111751, HMG-2 (m): 293T Lysate: sc-120832 or K-562 nuclear extract: sc-2130.

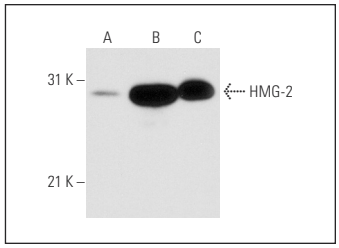
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



HMG-2 (68.32): sc-101067. Western blot analysis of HMG-2 expression in non-transfected: sc-117752 (**A**) and mouse HMG-2 transfected: sc-120832 (**B**) 293T whole cell lysates and K-562 nuclear extract (**C**).



HMG-2 (68.32): sc-101067. Western blot analysis of HMG-2 expression in non-transfected 293T: sc-117752 (**A**) and human HMG-2 transfected 293T: sc-111751 (**B**) whole cell lysates and HeLa nuclear extract (**C**).

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 for detailed protocols and support products.