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HMG-1 (D-3): sc-518191



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 NF κ B 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

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-I(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(Y). *Cell* 83: 1101-1111.

CHROMOSOMAL LOCATION

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

SOURCE

HMG-1 (D-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 78-101 of HMG-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HMG-1 (D-3) is available conjugated to agarose (sc-518191 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518191 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518191 PE), fluorescein (sc-518191 FITC), Alexa Fluor[®] 488 (sc-518191 AF488) or Alexa Fluor[®] 546 (sc-518191 AF546), Alexa Fluor[®] 594 (sc-518191 AF594) or Alexa Fluor[®] 647 (sc-518191 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-518191 AF680) or Alexa Fluor[®] 790 (sc-518191 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HMG-1 (D-3) is recommended for detection of HMG-1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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-1 siRNA (h): sc-37982, HMG-1 shRNA Plasmid (h): sc-37982-SH and HMG-1 shRNA (h) Lentiviral Particles: sc-37982-V.

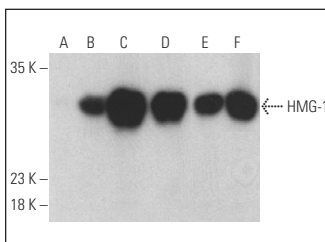
Molecular Weight of HMG-1: 30 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or HMG-1 (h): 293 Lysate: sc-110487.

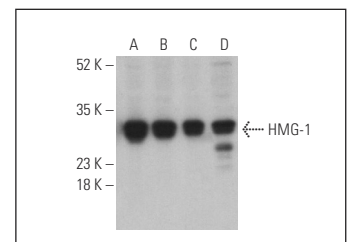
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



HMG-1 (D-3): sc-518191. Western blot analysis of HMG-1 expression in non-transfected 293: sc-110760 (A), human HMG-1 transfected 293: sc-110487 (B), Jurkat (C), HeLa (D), NIH/3T3 (E) and PC-12 (F) whole cell lysates. Detection reagent used: m-IgG κ BP-HRP: sc-516102.



HMG-1 (D-3): sc-518191. Western blot analysis of HMG-1 expression in Jurkat (A), HeLa (B), A-431 (C) and Hep G2 (D) whole cell lysates. Detection reagent used: m-IgG κ BP-HRP: sc-516102.

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.

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