SANTA CRUZ BIOTECHNOLOGY, INC.

HMG-1 (B-5): sc-518194

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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.
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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.
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CHROMOSOMAL LOCATION

Genetic locus: HMGB1 (human) mapping to 13q12.3; Hmgb1 (mouse) mapping to 5 G3.

SOURCE

HMG-1 (B-5) 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 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HMG-1 (B-5) is recommended for detection of HMG-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 siRNA (m): sc-37983, HMG-1 shRNA Plasmid (h): sc-37982-SH, HMG-1 shRNA Plasmid (m): sc-37983-SH, HMG-1 shRNA (h) Lentiviral Particles: sc-37982-V and HMG-1 shRNA (m) Lentiviral Particles: sc-37983-V.

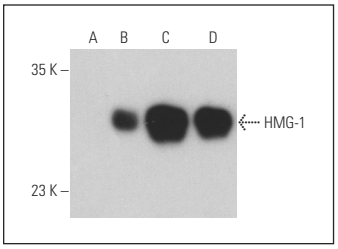
Molecular Weight of HMG-1: 30 kDa.

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

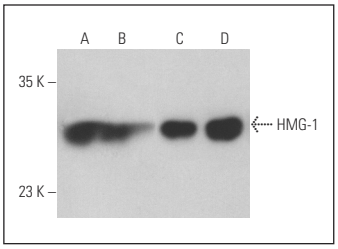
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 (B-5): sc-518194. Western blot analysis of HMG-1 expression in non-transfected 293: sc-110760 (**A**), human HMG-1 transfected 293: sc-110487 (**B**), Jurkat (**C**) and HeLa (**D**) whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408.



HMG-1 (B-5): sc-518194. Western blot analysis of HMG-1 expression in Jurkat (**A**), HeLa (**B**), NIH/3T3 (**C**) and PC-12 (**D**) whole cell lysates. Detection reagent used: m-IgGκ 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.