

HMG-1/2/3 (FL-215): sc-33199

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

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2. Bustin, M., et al. 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 HMG-I(Y). *J. Biol. Chem.* 270: 4355-4360.
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6. Falvo, J.V., et al. 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.
7. Wood, L.D., et al. 1995. HMG-I(Y) and Sp1 in addition to NF κ B regulate transcription of the MGSA/GRO a gene. *Nucl. Acids Res.* 23: 4210-4219.
8. Love, J.J., et al. 1995. Structural basis for DNA bending by the architectural transcription factor LEF-1. *Nature* 376: 791-795.

SOURCE

HMG-1/2/3 (FL-215) is a rabbit polyclonal antibody raised against amino acids 1-215 representing full length HMG-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-33199 X, 200 μ g/0.1 ml.

STORAGE

Store at 4 $^{\circ}$ 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.

APPLICATIONS

HMG-1/2/3 (FL-215) is recommended for detection of HMG-1, 2 and 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

HMG-1/2/3 (FL-215) is also recommended for detection of HMG-1, 2 and 3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HMG-1/2/3 siRNA (m): sc-270031, HMG-1/2/3 shRNA Plasmid (m): sc-270031-SH and HMG-1/2/3 shRNA (m) Lentiviral Particles: sc-270031-V.

HMG-1/2/3 (FL-215) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

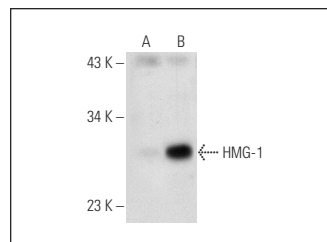
Molecular Weight of HMG-1: 30 kDa.

Molecular Weight of HMG-2: 26 kDa.

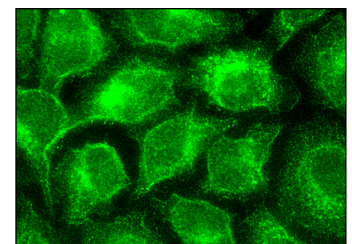
Molecular Weight of HMG-3: 25 kDa.

Positive Controls: HMG-1 (h): 293 Lysate: sc-110487 or MCF7 nuclear extract: sc-2149.

DATA



HMG-1/2/3 (FL-215): sc-33199. 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-1/2/3 (FL-215): sc-33199. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and membrane localization.

SELECT PRODUCT CITATIONS

1. Jiang, D., et al. 2008. Purification and identification of positive regulators binding to a novel element in the c-Jun promoter. *Biochemistry* 47: 9318-9334.
2. Ku, W.C., et al. 2009. Complementary quantitative proteomics reveals that transcription factor AP-4 mediates E-box-dependent complex formation for transcriptional repression of HDM2. *Mol. Cell. Proteomics* 8: 2034-2050


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Try **HMG-1 (HAP46.5): sc-56698**, our highly recommended monoclonal alternative to HMG-1/2/3 (FL-215).