

HMG-1 (T-16): sc-12523

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. 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.
4. Wang, D.Z., et al. 1995. Interleukin-4-inducible phosphorylation of HMG-1/HMG-Y is inhibited by rapamycin. *J. Biol. Chem.* 270: 22924-22932.
5. 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-1/HMG-Y. *Cell* 83: 1101-1111.
6. Wood, L.D., et al. 1995. HMG-1 (Y) and Sp1 in addition to NF κ B regulate transcription of the MGSA/GRO α gene. *Nucleic Acids Res.* 23: 4210-4219.

CHROMOSOMAL LOCATION

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

SOURCE

HMG-1 (T-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of 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.

Blocking peptide available for competition studies, sc-12523 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-12523 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.

APPLICATIONS

HMG-1 (T-16) is recommended for detection of HMG-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (T-16) is also recommended for detection of HMG-1 in additional species, including equine, canine, bovine and avian.

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.

HMG-1 (T-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of HMG-1: 30 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

SELECT PRODUCT CITATIONS

1. Schlueter, C., et al. 2005. Angiogenetic signaling through hypoxia: HMGB1: an angiogenetic switch molecule. *Am. J. Pathol.* 166: 1259-1263.
2. Van de Wouwer, M., et al. 2006. The lectin-like domain of thrombomodulin interferes with complement activation and protects against arthritis. *J. Thromb. Haemost.* 4: 1813-1824.
3. Hoppe, G., et al. 2007. Diurnal rhythm of the chromatin protein Hmgb1 in rat photoreceptors is under circadian regulation. *J. Comp. Neurol.* 501: 219-230.
4. Urbonaviciute, V., et al. 2007. Factors masking HMGB1 in human serum and plasma. *J. Leukoc. Biol.* 81: 67-74.
5. Meyer, A., et al. 2008. Non-Hodgkin lymphoma expressing high levels of the danger-signalling protein HMGB1. *Leuk. Lymphoma* 49: 1184-1189.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **HMG-1 (J2E1): sc-135809**, our highly recommended monoclonal alternative to HMG-1 (T-16).