SANTA CRUZ BIOTECHNOLOGY, INC.

HMG-1 (J2E1): sc-135809



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., et al. 1989. A human placental cDNA clone that encodes non-histone chromosomal protein HMG-1. Nucleic Acids Res. 17: 1197-1214.
- 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: 6641-6645.

CHROMOSOMAL LOCATION

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

SOURCE

HMG-1 (J2E1) is a mouse monoclonal antibody raised against full-length recombinant HMG-1 of human origin.

PRODUCT

Each vial contains 50 μg in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and 1% glycerol.

APPLICATIONS

HMG-1 (J2E1) 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), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:300).

Suitable for use as control antibody for HMG-1 siRNA (h): sc-37982, HMG-1 siRNA (m): sc-37983, HMG-1 siRNA (r): sc-270015, HMG-1 shRNA Plasmid (h): sc-37982-SH, HMG-1 shRNA Plasmid (m): sc-37983-SH, HMG-1 shRNA Plasmid (r): sc-270015-SH, HMG-1 shRNA (h) Lentiviral Particles: sc-37982-V, HMG-1 shRNA (m) Lentiviral Particles: sc-37983-V and HMG-1 shRNA (r) Lentiviral Particles: sc-270015-V.

Molecular Weight of HMG-1: 30 kDa.

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

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



HMG-1 (J2E1): sc-135809. Western blot analysis of HMG-1 expression in Jurkat (**A**) and HeLa (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

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- Da'at Arina, Y.M., et al. 2019. High-mobility group box 1 expression in mandibular bone cells of experimental periodontitis. Contemp. Clin. Dent. 10: 525-530.
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- Gopinath, P., et al. 2022. Identification of tumor biomarkers for pathological complete response to neoadjuvant treatment in locally advanced breast cancer. Breast Cancer Res. Treat. 194: 207-220.
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- Zhang, X., et al. 2023. HMGB 1 acetylation mediates trichloroethyleneinduced immune kidney injury by facilitating endothelial cell-podocyte communication. Ecotoxicol. Environ. Saf. 259: 115042.
- 10.Lei, C., et al. 2024. HMGB1/TLR4 axis promotes pyroptosis after ICH by activating the NLRP3 inflammasome. J. Neuroimmunol. 393: 578401.

RESEARCH USE

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