SANTA CRUZ BIOTECHNOLOGY, INC.

HMG-20A (D-5): sc-393028

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

High mobility group (HMG) proteins 1 and 2 are ubiquitous non-histone components of chromatin. The binding of HMG proteins to the minor groove of AT-rich DNA sequences induces alterations in the DNA architecture, including DNA bending and unwinding of the helix. While HMG proteins do not stimulate initiation of transcription, they do enhance the binding of other transcription factors, such as Oct-2, members of the NFκB family, ATF-2 and c-Jun, to activate transcription. HMG-20A (high-mobility group 20A), also known as HMGX1 or HMGXB1, is a 347 amino acid protein that localizes to the nucleus and contains one HMG box DNA-binding domain. Expressed ubiquitously, HMG-20A functions as an inhibitor of BRAF35 and, via its association with DNA, plays a role in neuronal differentiation and may also mediate the methylation of Histone H3. Multiple isoforms of HMG-20A exist due to alternative splicing events.

REFERENCES

1. Bustin, M., et al. 1990. Structural features of the HMG chromosomal proteins and their genes. Biochim. Biophys. Acta 1049: 231-243.
2. Sumoy, L., et al. 2000. HMG20A and HMG20B map to human chromosomes 15q24 and 19p13.3 and constitute a distinct class of HMG-box genes with ubiquitous expression. Cytogenet. Cell Genet. 88: 62-67.
3. Dailey, L. and Basilico, C. 2001. Coevolution of HMG domains and homeodomains and the generation of transcriptional regulation by Sox/POU complexes. J. Cell. Physiol. 186: 315-328.
4. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605534. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: HMG20A (human) mapping to 15q24.3; Hmg20a (mouse) mapping to 9 B.

SOURCE

HMG-20A (D-5) is a mouse monoclonal antibody raised against amino acids 237-347 mapping at the C-terminus of HMG-20A 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-393028 X, 200 µg/0.1 ml.

HMG-20A (D-5) is available conjugated to agarose (sc-393028 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393028 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393028 PE), fluorescein (sc-393028 FITC), Alexa Fluor® 488 (sc-393028 AF488), Alexa Fluor® 546 (sc-393028 AF546), Alexa Fluor® 594 (sc-393028 AF594) or Alexa Fluor® 647 (sc-393028 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393028 AF680) or Alexa Fluor® 790 (sc-393028 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HMG-20A (D-5) is recommended for detection of HMG-20A 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).

HMG-20A (D-5) is also recommended for detection of HMG-20A in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HMG-20A siRNA (h): sc-75267, HMG-20A siRNA (m): sc-75268, HMG-20A shRNA Plasmid (h): sc-75267-SH, HMG-20A shRNA Plasmid (m): sc-75268-SH, HMG-20A shRNA (h) Lentiviral Particles: sc-75267-V and HMG-20A shRNA (m) Lentiviral Particles: sc-75268-V.

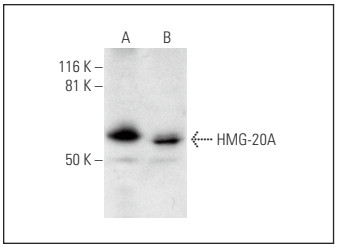
HMG-20A (D-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of HMG-20A: 40 kDa.

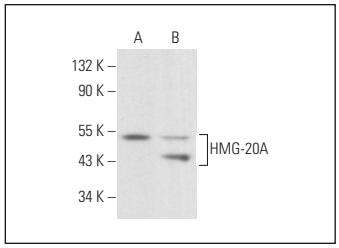
Molecular Weight (observed) of HMG-20A: 57 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, TK-1 whole cell lysate: sc-364798 or HeLa nuclear extract: sc-2120.

DATA



HMG-20A (D-5): sc-393028. Western blot analysis of HMG-20A expression in Jurkat (**A**) and HeLa (**B**) nuclear extracts.



HMG-20A (D-5): sc-393028. Western blot analysis of HMG-20A expression in HeLa nuclear extract (**A**) and TK-1 whole cell lysate (**B**).

SELECT PRODUCT CITATIONS

1. McClellan, D., et al. 2019. Growth factor independence 1B-mediated transcriptional repression and lineage allocation require lysine-specific demethylase 1-dependent recruitment of the BHC complex. Mol. Cell. Biol. 39: e00020-19.

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.