

# HBP1 (G-8): sc-515281

## BACKGROUND

The HMG-box protein-1 (HBP1) is a member of the HMG family of transcription factors, which are characterized by the presence of a conserved protein motif, the high mobility group (HMG) 1 box, that mediates DNA binding. HBP1 binds to the tumor suppressor proteins Rb and p130 and initiates cell cycle arrest. Terminal cell differentiation requires this initial cell cycle arrest followed by the coordinated expression of genes defined as tissue-specific markers. Along with initiating the commitment to cell differentiation, the continued activity of HBP1 abrogates the expression of tissue-specific genes by associating with the MyoD proteins. In muscle cell differentiation, the MyoD family of transcription factors, which include Myf5, MyoD and myogenin, induce the expression of these cell-type specific proteins and contribute to the development of cell phenotypes. The progression of terminal differentiation is, therefore, dependent on both a decrease in HBP1 activity and the corresponding activation of MyoD-induced gene transcription.

## REFERENCES

1. Yee, S.P., et al. 1993. The regulation of myogenin gene expression during the embryonic development of the mouse. *Genes Dev.* 7: 1277-1289.
2. Lesage, F., et al. 1994. Expression cloning in K<sup>+</sup> transport defective yeast and distribution of HBP1, a new putative HMG transcriptional regulator. *Nucleic Acids Res.* 22: 3685-3688.
3. Lavender, P., et al. 1997. The HMG-box transcription factor HBP1 is targeted by the pocket proteins and E1A. *Oncogene* 14: 2721-2728.

## CHROMOSOMAL LOCATION

Genetic locus: HBP1 (human) mapping to 7q22.3; Hbp1 (mouse) mapping to 12 A3.

## SOURCE

HBP1 (G-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 477-502 near the C-terminus of HBP1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> 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-515281 X, 200 µg/0.1 ml.

HBP1 (G-8) is available conjugated to agarose (sc-515281 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515281 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515281 PE), fluorescein (sc-515281 FITC), Alexa Fluor<sup>®</sup> 488 (sc-515281 AF488), Alexa Fluor<sup>®</sup> 546 (sc-515281 AF546), Alexa Fluor<sup>®</sup> 594 (sc-515281 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-515281 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-515281 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-515281 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515281 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

HBP1 (G-8) is recommended for detection of HBP1 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 HBP1 siRNA (h): sc-35532, HBP1 siRNA (m): sc-35533, HBP1 shRNA Plasmid (h): sc-35532-SH, HBP1 shRNA Plasmid (m): sc-35533-SH, HBP1 shRNA (h) Lentiviral Particles: sc-35532-V and HBP1 shRNA (m) Lentiviral Particles: sc-35533-V.

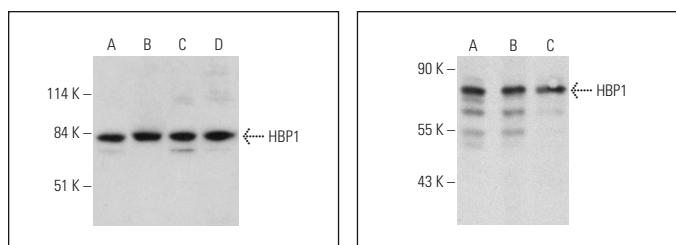
HBP1 (G-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of HBP1: 58 kDa.

Molecular Weight (observed) of HBP1: 83 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411, U-937 cell lysate: sc-2239 or Jurkat whole cell lysate: sc-2204.

## DATA



HBP1 (G-8): sc-515281. Western blot analysis of HBP1 expression in U-87 MG (A), U-937 (B), T98G (C) and Jurkat (D) whole cell lysates.

HBP1 (G-8): sc-515281. Western blot analysis of HBP1 expression in NIH/3T3 (A), C3H/10T1/2 (B) and L8 (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Cui, J., et al. 2020. Chikusetsu saponin IVa protects pancreatic β cell against intermittent high glucose-induced injury by activating Wnt/β-catenin/TCF7L2 pathway. *Aging* 12: 1591-1609.
2. Yao, J., et al. 2021. ICBP90 regulates MIF expression, glucocorticoid sensitivity, and apoptosis at the, MIF immune susceptibility locus. *Arthritis Rheumatol.* E-published.

## 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](http://www.scbt.com) for detailed protocols and support products.