SANTA CRUZ BIOTECHNOLOGY, INC.

HBP1 (cl. 65): sc-56682

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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-specifc 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 Myf-5, MyoD and myogenein, 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. and Rigby, P.W. 1993. The regulation of myogenin gene expression during the embryonic development of the mouse. Genes Dev. 7: 1277-1289.
2. Lesage, F., Hugnot, J.P., Amri, E.Z., Grimaldi, P., Barhanin, J. and Lazdunski, M. 1994. Expression cloning in K^+ transport defective yeast and distribution of HBP1, a new putative HMG transcriptional regulator. Nucleic Acids Res. 22: 3685-3688.
3. Lavender, P., Vandel, L., Bannister, A.J. and Kouzarides, T. 1997. The HMG-box transcription factor HBP1 is targeted by the pocket proteins and E1A. Oncogene 14: 2721-2728.
4. Tevosian, S.G., Shih, H.H., Mendelson, K.G., Sheppard, K.A., Paulson, K.E. and Yee, A.S. 1997. HBP1: a HMG box transcriptional repressor that is targeted by the retinoblastoma family. Genes Dev. 11: 383-396.
5. Liebermann, D.A. and Hoffman, B. 1998. MyD genes in negative growth control. Oncogene 17: 3319-3329.
6. Shih, H.H., Tevosian, S.G. and Yee, A.S. 1998. Regulation of differentiation by HBP1, a target of the retinoblastoma protein. Mol. Cell. Biol. 18: 4732-4743.

CHROMOSOMAL LOCATION

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

SOURCE

HBP1 (cl. 65) is a mouse monoclonal antibody raised against HBP1 of human origin.

PRODUCT

Each vial contains 100 µl culture supernatant containing IgG_1 with PBS, < 0.05% sodium azide, 0.005% thimerosal and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

HBP1 (cl. 65) is recommended for detection of HBP1 of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:1000).

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 (H-300) 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: Y79 cell lysate: sc-2240, Y79 nuclear extract: sc-2126 or HeLa whole cell lysate: sc-2200.

STORAGE

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

PROTOCOLS

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