

HMBOX1 (E-19): sc-87768

BACKGROUND

The homeobox DNA-binding domain is a 60 amino acid motif that is conserved among many species and functions to bind DNA via a helix-turn-helix structure, thereby playing a role in transcriptional regulation and the control of gene expression. HMBOX1 (homeobox containing 1), also known as PBHNF or HNF1LA, is a 420 amino acid nuclear protein that contains one homeobox DNA-binding domain and is thought to function as a putative transcription factor. HMBOX1 is expressed as three alternatively spliced isoforms and is encoded by a gene which maps to human chromosome 8. Consisting of nearly 146 million base pairs, chromosome 8 encodes over 800 genes and is associated with a variety of diseases and malignancies. Schizophrenia, bipolar disorder, trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas are thought to occur as a result of defects in specific genes that maps to chromosome 8.

REFERENCES

1. Wildenauer, D.B. and Schwab, S.G. 1999. Chromosomes 8 and 10 workshop. *Am. J. Med. Genet.* 88: 239-243.
2. Kashino, G., et al. 2001. Preferential expression of an intact WRN gene in Werner syndrome cell lines in which a normal chromosome 8 has been introduced. *Biochem. Biophys. Res. Commun.* 289: 111-115.
3. Selicorni, A., et al. 2002. Cytogenetic mapping of a novel locus for type II Waardenburg syndrome. *Hum. Genet.* 110: 64-67.
4. McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. *Am. J. Hum. Genet.* 77: 582-595.
5. Agrelo, R., et al. 2006. Epigenetic inactivation of the premature aging Werner syndrome gene in human cancer. *Proc. Natl. Acad. Sci. USA* 103: 8822-8827.
6. Nusbaum, C., et al. 2006. DNA sequence and analysis of human chromosome 8. *Nature* 439: 331-335.

CHROMOSOMAL LOCATION

Genetic locus: HMBOX1 (human) mapping to 8p21.1; Hmbox1 (mouse) mapping to 14 D1.

SOURCE

HMBOX1 (E-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of HMBOX1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-87768 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

HMBOX1 (E-19) is recommended for detection of HMBOX1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HMBOX1 (E-19) is also recommended for detection of HMBOX1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for HMBOX1 siRNA (h): sc-77422, HMBOX1 siRNA (m): sc-146045, HMBOX1 shRNA Plasmid (h): sc-77422-SH, HMBOX1 shRNA Plasmid (m): sc-146045-SH, HMBOX1 shRNA (h) Lentiviral Particles: sc-77422-V and HMBOX1 shRNA (m) Lentiviral Particles: sc-146045-V.

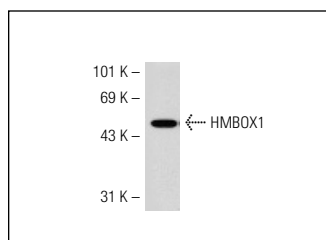
Molecular Weight of HMBOX1: 47 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



HMBOX1 (E-19): sc-87768. Western blot analysis of HMBOX1 expression in Jurkat whole cell lysate.

PROTOCOLS

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

RESEARCH USE

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