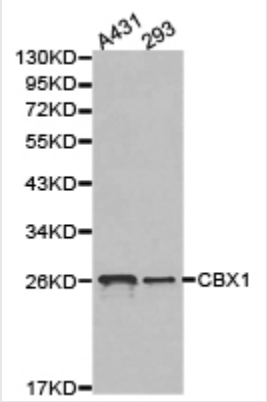
HP1beta Antibody – Rabbit

PRODUCT OVERVIEW

Product Name	HP1beta, Antibody
Full Product Name	HP1beta Antibody
Product Gene Name	anti-HP1beta antibody
Product Synonym Names	CBX; HP1-BETA; HP1Hs-beta; HP1Hsbeta; M31; MOD1; p25beta
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Purity/Purification	Affinity purification
Preparation and Storage	Store at-20 degree C or-80 degree C. Avoid freeze/thaw cycles.
Molecular Weight	27kDa
OMIM	604511
3D Structure	ModBase 3D Structure for P83916
Immunogen	Fusion protein of human CBX1
Storage Buffer	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Product Categories/Family for anti-HP1beta antibody	Autophagy antibody; Cancer; Cardiovascular; Cell Biology; Epigenetics & Nuclear Signaling; Developmental Biologys; Immunology; Drug Discovery Products; Metabolism; Neuroscience; Signal Transduction; Stem Cells
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-HP1beta antibody	Western Blot (WB)
Application Notes for anti-HP1beta antibody	WB: 1:500-1:1000
Related Product Information for anti-HP1beta antibody	Heterochromatin protein 1 (HP1) is a family of heterochromatic adaptor molecules involved in both gene silencing and higher order chromatin structure (1). All three HP1 family members (alpha, beta, and gamma) are primarily associated with centromeric heterochromatin; however, HP1beta and gamma also localize to euchromatic sites in the genome (2, 3). HP1 proteins are approximately 25 kDa in size and contain a conserved amino-terminal chromodomain, followed by a variable hinge region and a conserved carboxy-terminal chromoshadow domain. The chromodomain facilitates binding to histone H3 tri-methylated at Lys9, a histone "mark" closely associated with centromeric heterochromatin (4, 5). The variable hinge region binds both RNA and DNA in a sequence-independent manner (6). The chromoshadow domain mediates the dimerization of HP1 proteins, in addition to binding multiple proteins implicated in gene silencing and heterochromatin formation, including the SUV39H histone methyltransferase, the DNMT1 and DNMT3a DNA methyltransferases, and the p150 subunit of chromatin-assembly factor-1 (CAF1) (7-9). In addition to contributing to heterochromatin formation and propagation, HP1 and SUV39H are also found complexed with retinoblastoma (Rb) and E2F6 proteins, both of which function to repress euchromatic gene transcription in quiescent cells (10, 11). HP1 proteins are subject to multiple types of post-translational modifications, including phosphorylation, acetylation, methylation, ubiquitination, and sumoylation, suggesting multiple means of regulation (12-14).

Product References and Citations for anti-HP1beta antibody	1. Maison, C. and Almouzni, G. (2004) Nat. Rev. Mol. Cell Biol. 5, 296-304. 2. Minc, E. et al. (2000) Cytogenet. Cell Genet. 90, 279-284. 3. Nielsen, A.L. et al. (2001) Mol. Cell 7, 729-739. 4. Lachner, M. et al. (2001) Nature 410, 116-120. 5. Bannister, A.J. et al. (2001) Nature 410, 120-124. 6. Muchardt, C. et al. (2002) EMBO Rep. 3, 975-981. 7. Yamamoto, K. and Sonoda, M. (2003) Biochem. Biophys. Res. Commun. 301, 287-292. 8. Fuks, F. et al. (2003) Nucleic Acids Res. 31, 2305-2312. 9. Murzina, N. et al. (1999) Mol. Cell 4, 529-540. 10. Nielsen, S.J. et al. (2001) Nature 412, 561-565. 11. Ogawa, H. et al. (2002) Science 296, 1132-1136. 12. Minc, E. et al. (1999) Chromosoma 108, 220-234. 13. Zhao, T. et al. (2001) J. Biol. Chem. 276, 9512-9518. 14. Lomberk, G. et al. (2006) Nat. Cell Biol. 8, 407-415.
Other Notes	Small volumes of anti-HP1beta antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for HP1beta purchase	MBS8501611 is an antibody targeting HP1beta. Also known as HP1beta Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.



Western Blot (WB) of anti-HP1beta antibody
Western blot analysis of extracts of various celllines, using CBX1antibody.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HP1beta. It may not necessarily be applicable to this product.

NCBI GI #	187960037
NCBI GeneID	10951
NCBI Accession #	NP_001120700.1
UniProt Primary Accession #	P83916
UniProt Secondary Accession #	P23197
UniProt Related Accession #	P83916
GenBank Nucleotide #	NM_001127228.1
NCBI Official Full Name	chromobox protein homolog 1
NCBI Official Synonym Full Names	chromobox 1
NCBI Official Symbol	CBX1
NCBI Official Synonym Symbols	CBX; M31; MOD1; p25beta; HP1-BETA; HP1Hsbeta; HP1Hs-beta
UniProt Protein Name	Chromobox protein homolog 1
UniProt Synonym Protein Names	HP1Hsbeta; Heterochromatin protein 1 homolog beta; HP1 beta; Heterochromatin protein p25; M31; Modifier 1 protein; p25beta
UniProt Gene Name	CBX1
UniProt Synonym Gene Names	CBX; HP1 beta

NCBI Protein Information	chromobox protein homolog 1
NCBI Summary for HP1beta	This gene encodes a highly conserved nonhistone protein, which is a member of the heterochromatin protein family . The protein is enriched in the heterochromatin and associated with centromeres. The protein has a single N-terminal chromodomain which can bind to histone proteins via methylated lysine residues, and a C-terminal chromo shadow-domain (CSD) which is responsible for the homodimerization and interaction with a number of chromatin-associated nonhistone proteins. The protein may play an important role in the epigenetic control of chromatin structure and gene expression. Several related pseudogenes are located on chromosomes 1, 3, and X. Multiple alternatively spliced variants, encoding the same protein, have been identified. [provided by RefSeq, Jul 2008]
UniProt Comments for HP1beta	Component of heterochromatin. Recognizes and binds histone H3 tails methylated at 'Lys-9', leading to epigenetic repression. Interaction with lamin B receptor (LBR) can contribute to the association of the heterochromatin with the inner nuclear membrane.
Research Articles on HP1beta	**1.** the prolyl residue of the PXXVXL motif appears to play a role distinct from that of Pro in the known HP1beta CSD-PXVXL complexes.
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