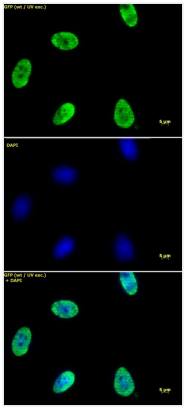
Histone H4 (HIST2H4B) Antibody – Rabbit Polyclonal

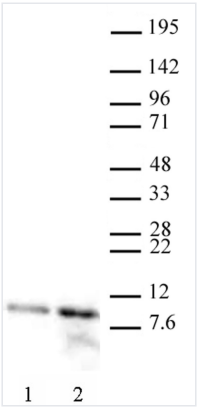
PRODUCT OVERVIEW

Product Name	Histone H4 (HIST2H4B), Polyclonal Antibody
Full Product Name	Histone H4 (Ac12) antibody
Product Gene Name	anti-HIST2H4B antibody
Product Synonym Names	RABBIT ANTI HUMAN HISTONE H4 (Ac12)
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Purified IgG - liquid Phosphate buffered saline 0.035% Sodium Azide (NaN3), 30% Glycerol
Purity/Purification	Antiserum to human histone H4 (Ac12) was raised by repeated immunization of rabbits with highly purified antigen. Purified IgG was prepared from whole serum by affinity chromatography on Protein A.
Preparation and Storage	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20 degree C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8 degree C for short term use (up to 4 weeks) and store the remaining aliquots at -20 degree C. Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. Should this product contain a precipitate we recommend microcentrifugation before use.
Molecular Weight	11,367 Da
Chromosome Location	Chromosome: 1; NC_000001.10 (149832330..149832725, complement). Location: 1q21
OMIM	142750
3D Structure	ModBase 3D Structure for P62805
Species Cross-Reactivity	Mouse:Yes
Immunogen	A peptide including acetylated lysine 12 of histone H4
Applications Tested/Suitable for anti-HIST2H4B antibody	Chromatin Immunoprecipitation (ChIP), Immunofluorescence (IF), Western Blot (WB)
Application Notes for anti-HIST2H4B antibody	ChIP: Yes; Max Dilution: 10 ug per ChIP IF: Yes; Min Dilution: 1 ug/ml; Max Dilution: 2 ug/ml WB: Yes; Min Dilution: 1 ug/ml; Max Dilution: 2 ug/ml
Related Product Information for anti-HIST2H4B antibody	Rabbit anti Human histone H4 (Ac12) antibody recognizes histone H4 when acetylated at lysine 12. Histone H4 is one of the four core histones that make up the nucleosome core particle. Nucleosomes are the smallest subunit of chromatin and are made up of 146 bp of DNA wrapped around an octamer comprised of pairs of the four core histones (H2A, H2B, H3, and H4) (Smith, 1991). Histones may be modified in several ways including acetylation, methylation, phosphorylation, ubiquitination, glycosylation, and SUMOylation (Koch et al. 2007). Lysine residues within the N-terminal tail protruding from the histone core of the nucleosome are acetylated and deacetylated as part of gene regulation. Hyperacetylation of histone tails makes chromatin more accessible to DNA-binding proteins by weakening histone-DNA and nucleosome-nucleosome interactions (Kuo and Allis, 1998). Acetylation of histone H4 usually results in transcriptional activation (Turner et al. 1989). Wide species cross-reactivity is expected from Rabbit anti Human histone H4 (Ac12) antibody based on sequence.

Other Notes	Small volumes of anti-HIST2H4B 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 HIST2H4B purchase	MBS226568 is an antibody targeting HIST2H4B. Also known as Histone H4 (Ac12) antibody. Reactive in Human. Host: Rabbit.



Immunofluorescence (IF) of anti-HIST2H4B antibody
Immunofluorescence staining of HeLa cells probed with histone H4 (Ac12) antibody (MBS226568) at a 2 ug/ml dilution (top) and DAPI (middle). Bottom panel shows merged images..



Western Blot (WB) of anti-HIST2H4B antibody
Western blot analysis of untreated HeLa nuclear extract (20 ug; lane 1) or HeLa nuclear extract treated with sodium butyrate (lane 2) probed with histone H4 (Ac12) antibody (MBS226568) at a 1 ug/ml dilution.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HIST2H4B. It may not necessarily be applicable to this product.

NCBI GI #	77539758
NCBI GeneID	554313
NCBI Accession #	NP_001029249.1
UniProt Primary Accession #	P62805
UniProt Secondary Accession #	P02304; P02305; Q6DRA9; Q6FGB8; Q6NWP7; A2VCL0
UniProt Related Accession #	P62805
GenBank Nucleotide #	NM_001034077.4
NCBI Official Full Name	histone H4
NCBI Official Synonym Full Names	histone cluster 2, H4b
NCBI Official Symbol	HIST2H4B
NCBI Official Synonym Symbols	H4/o
UniProt Protein Name	Histone H4
Protein Family	Histone H4-like protein
UniProt Gene Name	HIST1H4A
UniProt Synonym Gene Names	H4/A; H4FA
UniProt Entry Name	H4_HUMAN
NCBI Protein Information	histone H4; histone 2, H4b

NCBI Summary for HIST2H4B	Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. This structure consists of approximately 146 bp of DNA wrapped around a nucleosome, an octamer composed of pairs of each of the four core histones (H2A, H2B, H3, and H4). The chromatin fiber is further compacted through the interaction of a linker histone, H1, with the DNA between the nucleosomes to form higher order chromatin structures. This gene is intronless and encodes a member of the histone H4 family. Transcripts from this gene lack polyA tails; instead, they contain a palindromic termination element. This gene is found in a histone cluster on chromosome 1. This gene is one of four histone genes in the cluster that are duplicated; this record represents the telomeric copy. [provided by RefSeq, Jul 2008]
UniProt Comments for HIST2H4B	Function: Core component of nucleosome. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling. Subunit structure: The nucleosome is a histone octamer containing two molecules each of H2A, H2B, H3 and H4 assembled in one H3-H4 heterotetramer and two H2A-H2B heterodimers. The octamer wraps approximately 147 bp of DNA. Subcellular location: Nucleus. Chromosome. Post-translational modification: Acetylation at Lys-6 (H4K5ac), Lys-9 (H4K8ac), Lys-13 (H4K12ac) and Lys-17 (H4K16ac) occurs in coding regions of the genome but not in heterochromatin.Citrullination at Arg-4 (H4R3ci) by PADI4 impairs methylation.Monomethylation and asymmetric dimethylation at Arg-4 (H4R3me1 and H4R3me2a, respectively) by PRMT1 favors acetylation at Lys-9 (H4K8ac) and Lys-13 (H4K12ac). Demethylation is performed by JMJD6. Symmetric dimethylation on Arg-4 (H4R3me2s) by the PRDM1/PRMT5 complex may play a crucial role in the germ-cell lineage.Monomethylated, dimethylated or trimethylated at Lys-21 (H4K20me1, H4K20me2, H4K20me3). Monomethylation is performed by SET8. Trimethylation is performed by SUV420H1 and SUV420H2 and induces gene silencing. Ref.19 Ref.20 Ref.21 Ref.23 Ref.24 Ref.28Phosphorylated by PAK2 at Ser-48 (H4S47ph). This phosphorylation increases the association of H3.3-H4 with the histone chaperone HIRA, thus promoting nucleosome assembly of H3.3-H4 and inhibiting nucleosome assembly of H3.1-H4. Ref.28 Ref.36Ubiquitinated by the CUL4-DDB-RBX1 complex in response to ultraviolet irradiation. This may weaken the interaction between histones and DNA and facilitate DNA accessibility to repair proteins. Monoubiquitinated at Lys-92 of histone H4 (H4K91ub1) in response to DNA damage. The exact role of H4K91ub1 in DNA damage response is still unclear but it may function as a licensing signal for additional histone H4 post-translational modifications such as H4 Lys-21 methylation (H4K20me). Ref.27 Ref.30Sumoylated, which is associated with transcriptional repression. Ref.22Crotonylation (Kcr) is specifically present in male germ cells and marks testis-specific genes in post-meiotic cells, including X-linked genes that escape sex chromosome inactivation in haploid cells. Crotonylation marks active promoters and enhancers and confers resistance to transcriptional repressors. It is also associated with post-meiotically activated genes on autosomes. Ref.35 Sequence similarities: Belongs to the histone H4 family. Sequence caution: The sequence AAI28106.1 differs from that shown. Reason: Frameshift at position 3.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
Disclaimer	While every efforts were made to ensure the accuracy of the information provided in this datasheet, MyBioSource will not be liable for any omissions or errors contained herein. MyBioSource reserves the right to make changes to this datasheet at any time without prior notice. It is the responsibility of the customer to report product performance issues to MyBioSource within 30 days of receipt of the product. Please visit our Terms & Conditions page for more information.

Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

MyBioSource | Tel: +1.858.633.0165 | Fax: +1.858.633.0166 | mybiosource.com/contact-us
Online datasheet: https://www.mybiosource.com/polyclonal-hist2h4b-human-antibody/histone-h4/226568