Histone H3 (H3) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Histone H3, Polyclonal Antibody
Full Product Name	Histone H3 Rabbit pAb
Product Gene Name	anti-H3 antibody
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Purified Rabbit polyclonal in PBS (pH 7.4) containing with 0.02% sodium azide and 50% glycerol.
Purity/Purification	Affinity purified
Preparation and Storage	Store at 4 degree C short term. Store at -20 degree C long term. Avoid freeze/thaw cycle.
Molecular Weight	15,404 Da
Chromosome Location	Chromosome: 6; NC_000006.11 (26020718..26021186). Location: 6p22.1
OMIM	602810
3D Structure	ModBase 3D Structure for P68431
Immunogen	A synthetic peptide corresponding to the carboxy terminus of the human histone H3 protein
Product Categories/Family for anti-H3 antibody	Primary antibody
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-H3 antibody	Western Blot (WB), Immunofluorescence (IF)
Application Notes for anti-H3 antibody	WB: 1:5000~1:50000 IF 1:100~1:1000
Related Product Information for anti-H3 antibody	Modulation of chromatin structure plays an important role in the regulation of transcription in eukaryotes. The nucleosome, made up of DNA wound around eight core histone proteins (two each of H2A, H2B, H3, and H4), is the primary building block of chromatin. The amino-terminal tails of core histones undergo various post-translational modifications, including acetylation, phosphorylation, methylation, and ubiquitination. These modifications occur in response to various stimuli and have a direct effect on the accessibility of chromatin to transcription factors and, therefore, gene expression. In most species, histone H2B is primarily acetylated at Lys5, 12, 15, and 20. Histone H3 is primarily acetylated at Lys9, 14, 18, 23, 27, and 56. Acetylation of H3 at Lys9 appears to have a dominant role in histone deposition and chromatin assembly in some organisms. Phosphorylation at Ser10, Ser28, and Thr11 of histone H3 is tightly correlated with chromosome condensation during both mitosis and meiosis (8-10). Phosphorylation at Thr3 of histone H3 is highly conserved among many species and is catalyzed by the kinase haspin. Immunostaining with phospho-specific antibodies in mammalian cells reveals mitotic phosphorylation at Thr3 of H3 in prophase and its dephosphorylation during anaphase.
Other Notes	Small volumes of anti-H3 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 H3 purchase	MBS8575624 is an antibody targeting H3. Also known as Histone H3 Rabbit pAb. Reactive in Human, Mouse, Rat. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for H3. It may not necessarily be applicable to this product.

NCBI GI #	4504281
NCBI GeneID	8350
NCBI Accession #	NP_003520.1
UniProt Primary Accession #	P68431
UniProt Secondary Accession #	P02295; P02296; P16106; Q6ISV8; Q6NWP8; Q6NWP9; Q6NXU4; Q71DJ3; Q93081; A0PJT7; A5PLR1
UniProt Related Accession #	P68431
GenBank Nucleotide #	NM_003529.2
NCBI Official Full Name	histone H3.1
NCBI Official Synonym Full Names	histone cluster 1, H3a
NCBI Official Symbol	HIST1H3A
NCBI Official Synonym Symbols	H3/A; H3FA
UniProt Protein Name	Histone H3.1
UniProt Synonym Protein Names	Histone H3/a; Histone H3/b; Histone H3/c; Histone H3/d; Histone H3/f; Histone H3/h; Histone H3/i; Histone H3/j; Histone H3/k; Histone H3/l
Protein Family	Tyrosine phosphatase
UniProt Gene Name	HIST1H3A
UniProt Synonym Gene Names	H3FA
UniProt Entry Name	H31_HUMAN
NCBI Protein Information	histone H3.1; histone H3/a; histone 1, H3a; H3 histone family, member A
NCBI Summary for H3	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 H3 family. Transcripts from this gene lack polyA tails; instead, they contain a palindromic termination element. This gene is found in the large histone gene cluster on chromosome 6p22-p21.3. [provided by RefSeq, Jul 2008]

UniProt Comments for H3	H3: 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. 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. Belongs to the histone H3 family. Protein type: DNA-binding Chromosomal Location of Human Ortholog: 6p22.2 Cellular Component: nucleoplasm; nuclear chromosome; protein complex; membrane; extracellular region; nucleosome; nucleus Molecular Function: protein binding; DNA binding; histone binding; protein heterodimerization activity Biological Process: chromatin silencing at rDNA; nucleosome assembly; establishment and/or maintenance of chromatin architecture; negative regulation of gene expression, epigenetic; protein heterotetramerization; gene expression; blood coagulation; regulation of gene expression, epigenetic; DNA replication-dependent nucleosome assembly; DNA methylation on cytosine
Research Articles on H3	**1.** The authors report that de novo CENP-A assembly and kinetochore formation on human centromeric alphoid DNA arrays is regulated by a histone H3K9 acetyl/methyl balance.
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