

PRODUCT INFORMATION



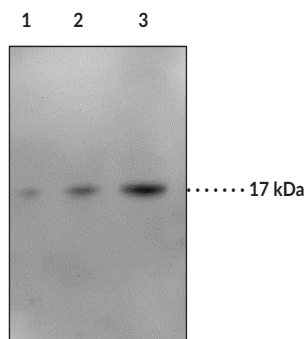
Histone H3 Monoclonal Antibody (Clone 2B8)

Item No. 19824

Overview and Properties

Contents:	This vial contains 100 µg of Protein G-purified IgG.
Synonym:	H3
Immunogen:	Recombinant Histone H3 protein
Cross Reactivity:	(-) Histones H2A, H2B, H4
Species Reactivity:	(+) Human H3
Uniprot No.:	P68431
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol with 0.1% BSA and 0.02% sodium azide
Clone:	2B8
Host:	Mouse
Isotype:	IgG2a
Applications:	ELISA and Western blot (WB); the recommended starting dilution is 1:500 for ELISA and WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Lane 1: Histone H3 (Human Recombinant) (25 ng)
Lane 2: Histone H3 (Human Recombinant) (50 ng)
Lane 3: Histone H3 (Human Recombinant) (100 ng)

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Histone H3 is a nuclear protein and a component of the nucleosome core, a basic unit of chromatin, that is essential for organizing genomic DNA in eukaryotic nuclei.¹ It is a globular protein that contains an unstructured N-terminal tail that extends outside of the nucleosome core and is subject to various post-translational modifications (PTMs), including methylation, phosphorylation, acetylation, and citrullination.^{1,2} Histone H3 PTMs function as epigenetic regulators of gene transcription by affecting chromatin structure and providing binding sites for many transcription factors, thus regulating several cellular functions including gene expression, cell cycle, and DNA replication and repair.^{1,3} Differential methylation of histone H3 at various lysine residues is catalyzed by SET domain-containing methyltransferases and marks sites of transcriptional activation or repression.¹ Citrullination of histone H3 by protein arginine deiminase 4 (PAD4; Item Nos. 10500 | 25915 | 28910) or PAD2 (Item No. 10785) induces the release of neutrophil extracellular traps (NETs), a network of decondensed DNA and intracellular proteins secreted by neutrophils as a pathogen defense mechanism.^{4,5} Histone H3 mutations have been found in patients with diffuse intrinsic pontine glioma, leukemia, or chondroblastoma.^{6,7} Cayman's Histone H3 Monoclonal Antibody (Clone 2B8) can be used for ELISA and Western blot (WB) applications. The antibody recognizes histone H3 at 17 kDa from human samples.

References

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