

PRODUCT INFORMATION



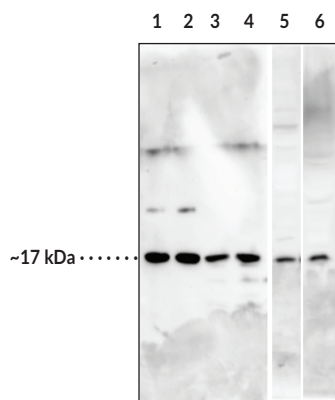
Histone H3 Polyclonal Antibody

Item No. 13781

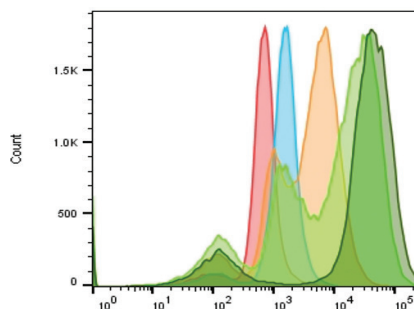
Overview and Properties

Contents: This vial contains 500 µg of protein-A purified polyclonal antibody.
Synonym: H3
Immunogen: Recombinant Histone H3 Protein
Cross Reactivity: (-) H2A, H2B, and 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, 0.1% BSA, and 0.02% sodium azide
Host: Rabbit
Applications: ELISA, Flow Cytometry (FC), Immunoprecipitation (IP), and Western blot (WB); the recommended starting dilution for ELISA and WB is 1:200, 1:1000 for FC, and 20 µg of antibody per test for IP. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: Recombinant Human Histone H3 (25 ng)
Lane 2: Recombinant Human Histone H3 (50 ng)
Lane 3: Core Histones (10 ng)
Lane 4: Core Histones (20 ng)
Lane 5: Raji Cell Lysates (50 µg)
Lane 6: A431 Cell Lysates (50 µg)



Sample Name	Subset Name	Count	
2017-06-26...A1.0010.fcs	Ungated	26503	A1.010 - HeLa H3 (10 µg)
2017-06-26...A1.0009.fcs	Ungated	33440	A1.009 - HeLa H3 (5 µg)
2017-06-26...A1.0008.fcs	Ungated	41028	A1.008 - HeLa H3 (1 µg)
2017-06-26...A1.0007.fcs	Ungated	46290	A1.007 - HeLa Secondary Alone
2017-06-26...A1.0006.fcs	Ungated	39048	A1.006 - HeLa PBS

Flow Cytometry: HeLa cells were PFA fixed and permeabilized followed by a fetal bovine serum block. Cells were probed with the indicated antibody and analyzed using a Miltenyi MACSQuant Analyzer.

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 Polyclonal Antibody can be used for ELISA, flow cytometry (FC), immunoprecipitation (IP), and Western blot (WB) applications. The antibody recognizes histone H3 at 15.5 kDa from human samples.

References

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6. Lowe, B.R., Maxham, L.A., Hamey, J.J., *et al.* Histone H3 mutations: An updated view of their role in chromatin deregulation and cancer. *Cancers (Basel)* **11(5)**, 660 (2019).
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