Direct-Blot™ HRP anti-Histone H3 Acetylated Lysine 9 (K9ac) Antibody

Catalog# / Size	698407 / 25 µL 698408 / 100 µL
Clone	2G1F9
Regulatory Status	RUO
Isotype	Rat IgG2a, κ
Description	Histone subunit H3, along with subunits 2A, 2B, and 4, make up the core subunits of the nucleosome octomer. An octomer contains two protomers of each subunit tightly wrapped around a ~147 bp segment of DNA. Histones have integral roles in chromatin integrity, genomic stability, and gene regulation. Post-translational modification of histones in response to certain stimuli results in alterations of nucleosomal positioning relative to DNA.

Product Details

Verified Reactivity	Human, Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Histone H3 K9ac peptide
Formulation	This antibody is provided in 50% glycerol in aqueous buffered solutions with preservatives.
Preparation	The antibody was purified by affinity chromatography and conjugated with HRP under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
Storage & Handling	Upon receipt, the antibody solution should be stored undiluted at -20°C, and protected from prolonged exposure to light.
Application	WB - *Quality tested*
Recommended Usage	Each lot of this antibody is quality control tested by western blotting. For western blotting, the suggested use of this reagent is 1:1000 - 1:2000 dilution. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	This clone is not recommended for ChIP (Chromatin Immunoprecipitation) assays (as determined by in-house testing).
RRID	AB_2861072 (BioLegend Cat. No. 698407) AB_2861073 (BioLegend Cat. No. 698408)

Antigen Details

Structure	Histone H3 is a 134 aa protein with a predicted molecular weight of 15.4 kD. The subunit is comprised of a histone fold, an αN-helix main globular domain and a large N-terminal tail harboring residues subject to multiple types of post-translational.
Distribution	Nucleus
Function	Histone acetylation is generally associated with activation of gene expression, nucleosomal redistribution, and histone deposition. One consequence of this modification is the alteration of chromatin structure to facilitate recruitment of transcription factors. Additionally, acetyl-lysine modification is also used as binding site for proteins containing bromodomains, resulting in their recruitment to the modified histones.
Interaction	Histones 2A, 2B, 4, HDAC

Biology Area	Cell Biology, Chromatin Remodeling/Epigenetics
Antigen References	1. Zhang, *et al*. 2017. *Nat. Commun.* 8: 14799. 2. Kanda M, *et al*. 2016. *Proc. Natl. Acad. Sci. USA* 113: E3394. 3. Bellet MM, *et al*. 2013. *Proc. Natl. Acad. Sci. USA* 9: 3333. 4. Li B, *et al*. 2016. *Sci. Rep.* 6: 26542. 5. Li D, *et al*. 2014, *Mol. Cancer*. 13:26.
Gene ID	8350

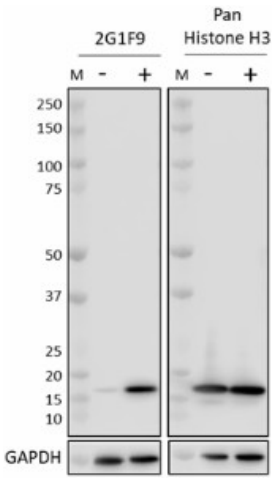
Related Protocols

Western Blotting Protocol

Other Formats

Purified anti-Histone H3 Acetylated Lysine 9 (K9ac), Alexa Fluor® 594 anti-Histone H3 Acetylated Lysine 9 (K9ac), Alexa Fluor® 488 anti-Histone H3 Acetylated Lysine 9 (K9ac), Direct-Blot™ HRP anti-Histone H3 Acetylated Lysine 9 (K9ac)

Product Data



Whole cell extracts (15 µg protein) from HeLa cells untreated (-) or treated (+) with 5 mM sodium butyrate for 16 hours were resolved by 4-12% Bis-Tris gel electrophoresis, transferred to a PVDF membrane, and probed with a 1:2000 dilution of Direct-Blot™ HRP anti-Histone H3 K9ac antibody (clone 2G1F9) at room temperature for 2 hours. Proteins were visualized by chemiluminescence detection system. Direct-Blot™ HRP anti-GAPDH antibody (Cat. No. 607904) was used as a loading control at a 1:50000 dilution (lower). Lane M: Molecular weight marker.

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