

PRODUCT INFORMATION

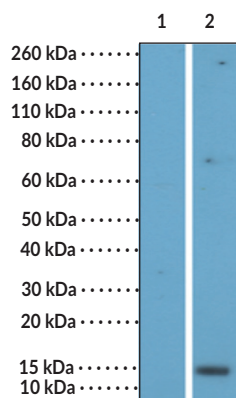
Histone H2AXK5Ac Rabbit Monoclonal Antibody (Clone RM445)

Item No. 42788

Overview and Properties

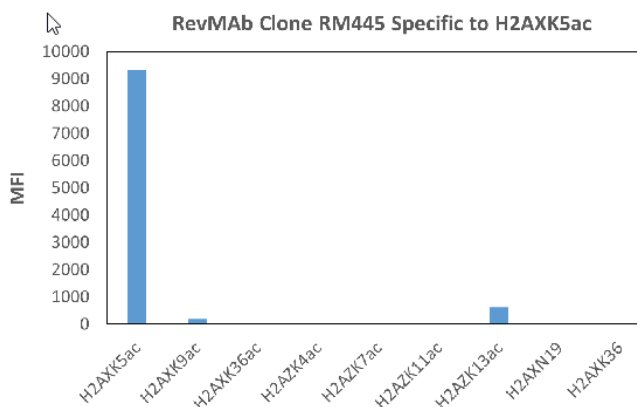
Contents:	This vial contains 100 µg of protein A affinity-purified monoclonal antibody
Synonym:	Histone H2A.XK5Ac
Immunogen:	A peptide corresponding to acetyl-Histone H2A.X (Lys5)
Cross Reactivity:	(+) H2AXK5Ac; (-) Unmodified H2AXK5, H2AXK9Ac, H2AXK36Ac, H2AZK4Ac, H2AZK7Ac, H2AZK11Ac, H2AZK13Ac, unmodified H2AXN19, unmodified H2AXK36
Species Reactivity:	(+) Human, vertebrates
Molecular Weight:	15 kDa
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
Concentration:	1.0 mg/ml
Clone:	RM445
Host:	Rabbit
Isotype:	IgG
Applications:	Multiplex-based assay and West blot (WB); the recommended concentration is 0.2 - 1 µg/ml for multiplex-based assay and 0.04 - 0.2 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: H2A recombinant protein
Lane 2: HeLa cell lysates acid extracts

WB of H2A recombinant protein and acid extracts of HeLa cell lysate using Histone H2AXK5Ac Rabbit Monoclonal Antibody (Clone RM445) at a dilution of 0.04 µg/ml



Description

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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PRODUCT INFORMATION



Histone H2AX is a variant of histone H2A, a nuclear protein and a component of the nucleosome core.^{1,2} It is a globular protein containing unstructured N- and C-terminal tails that extend outside of the nucleosome core that are subject to a variety of post-translational modifications (PTMs), including phosphorylation, acetylation, methylation, and ubiquitination, which function as epigenetic regulators of transcription.^{3,4} H2AX has a key role in the DNA damage response.^{1,3-5} Ionizing radiation induces acetylation of lysine 5 on H2AX (H2AXK5Ac) by TIP60, which is recognized by a bromodomain-like module in DNA protein kinase (DNA-PK).^{6,7} DNA-PK and other PI3K-like kinases ataxia-telangiectasia mutated kinase (ATM) and ataxia-telangiectasia and Rad3-related protein/kinase (ATR) phosphorylate serine 139 on H2AX (γH2AX) in response to DNA damage, leading to changes in chromatin structure at the damaged site that promote DNA repair.^{1,3-5} H2AX has additional roles in chromatin inactivation during meiosis and mitosis, as well as neural stem cell development and cellular senescence.⁵ Decreased tumor H2AX levels are associated with increased progression-free survival in patients with triple-negative breast cancer.⁸ Cayman's Histone H2AXK5Ac Rabbit Monoclonal Antibody (Clone RM445) can be used for multiplex-based assay and Western blot (WB) applications. The antibody recognizes H2AXK5Ac at 15 kDa from human samples.

References

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