

# PRODUCT INFORMATION



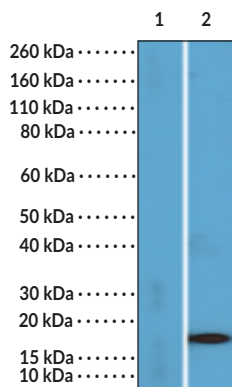
## Histone H3K27Cr Monoclonal Antibody (Clone RM401)

Item No. 32178

### Overview and Properties

<b>Contents:</b>	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
<b>Synonym:</b>	Crotonylated Histone H3 Lysine 27
<b>Immunogen:</b>	Peptide corresponding to H3K27Cr
<b>Cross Reactivity:</b>	(+) H3K27Cr; (-) Unmodified histone H3 (15-34), H3K27Ac, H3K27Pr, H3K9Cr
<b>Species Reactivity:</b>	(+) Human
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
<b>Clone:</b>	RM401
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Application:</b>	Western blot (WB); the recommended starting concentration is 0.5-5 µg/ml. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Image



Lane 1: HeLa cells untreated  
Lane 2: HeLa cells treated

WB of acid extracts of HeLa cells untreated or treated with sodium crotonate using Histone H3K27Cr Monoclonal Antibody (Clone RM401) at a concentration of 0.5 µg/ml.

**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

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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.<sup>1</sup> 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, citrullination, and crotonylation.<sup>1-3</sup> Crotonylation of histone H3 at lysine 27 (H3K27Cr) is associated with transcriptional activation.<sup>4</sup> It binds to the YEATS domain of the crotonylation reader protein YEATS domain-containing 2 (YEATS2) in the opposite orientation of H3K9Cr and H3K27Cr binding to the YEATS domain of human AF9. Cayman's H3K27Cr Monoclonal Antibody (Clone RM401) can be used for Western blot (WB) applications.

## References

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1. Hyun, K., Jeon, J., Park, K., *et al.* Writing, erasing and reading histone lysine methylations. *Exp. Mol. Med.* **49(4)**, e324 (2017).
2. Sharda, A., Amnekar, R.V., Natu, A., *et al.* Histone posttranslational modifications: Potential role in diagnosis, prognosis, and therapeutics of cancer. *Prognostic Epigenetics*. Sharma, S., editor, *Academic Press* (2019).
3. Wan, J., Liu, H., Chu, J., *et al.* Functions and mechanisms of lysine crotonylation. *J. Cell. Mol. Med.* **23(11)**, 7163-7169 (2019).
4. Li, Y., Zhao, D., Chen, Z., *et al.* YEATS domain: Linking histone crotonylation to gene regulation. *Transcription* **8(1)**, 9-14 (2017).

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