

PRODUCT INFORMATION



Citrullinated Histone H2A Type 1 (human, recombinant)

Item No. 30132

Overview and Properties

Synonyms: H2A Clustered Histone 11, H2A Histone Family, Member P, H2A Type 1, H2A.1, H2AC11, H2AFP, HIST1H2AG, Histone H2A/pt1
Source: Recombinant human histone H2A type 1 expressed in *E. coli*, citrullinated with recombinant human PAD4
Amino Acids: 2-130 (full length)
Uniprot No.: POCOS8
Molecular Weight: 13.96 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: *batch specific* (≥90% estimated by SDS-PAGE)
Supplied in: Water
Protein Concentration: *batch specific* mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images

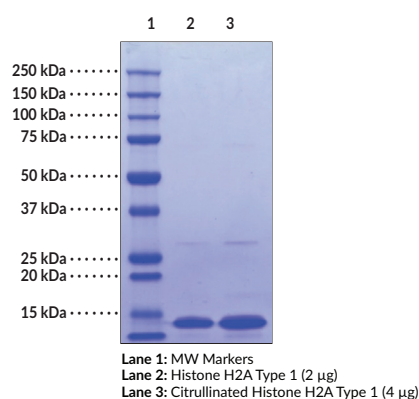


Figure 1: SDS-PAGE analysis of citrullinated histone H2A.

Representative gel image shown; actual purity may vary between each batch.

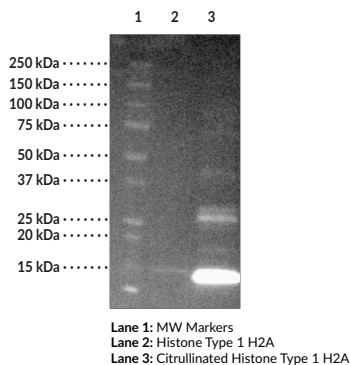


Figure 2: Analysis of histone H2A citrullination. Histone H2A and citrullinated histone H2A were reacted with Cayman's Citrulline-specific Probe-biotin (Item No. 17450) and detected using Streptavidin:HRP (Item No. 16747).

Representative gel image shown; actual purity may vary between each batch.



Identification of modified sites in Citrullinated Histone H2A Type 1 (Item No. 30132). Citrullinated Histone H2A Type 1 was detected by LC-MS/MS and analyzed using Mascot and Scaffold PTM software. Deiminated arginines are indicated in teal.

Citrullination sites shown are representative of typical results. Batch-to-batch variations may occur.

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.

Copyright Cayman Chemical Company, 10/22/2020

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

Citrullinated histone H2A type 1 is a citrullinated form of histone H2A, a core histone and a component of the nucleosome that wraps and condenses DNA.^{1,2} Histone H2A is subject to citrullination by protein arginine deiminase 4 (PAD4) at the arginine residue at position 3.³ Autoantibodies to histone H2A and citrullinated histone H2A are increased in the plasma of rheumatoid arthritis patients with anti-cyclic citrullinated peptide antibodies (CCP⁺) but not in the plasma of CCP⁻ patients.¹ Cayman's Citrullinated Histone H2A Type 1 (human, recombinant) protein can be used for Western blot and ELISA applications.

References

1. Mergaert, A.M., Bawadekar, M., Nguyen, T.Q., *et al.* Reduced anti-histone antibodies and increased risk of rheumatoid arthritis associated with a single nucleotide polymorphism in PADI4 in North Americans. *Int. J. Mol. Sci.* **20(12)**, E3093 (2019).
2. Eickbush, T.H. and Moudrianakis, E.N. The histone core complex: An octamer assembled by two sets of protein-protein interactions. *Biochemistry* **17(23)**, 4955-4964 (1978).
3. Fuhrmann, J. and Thompson, P.R. Protein arginine methylation and citrullination in epigenetic regulation. *ACS Chem. Biol.* **11(3)**, 654-668 (2016).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM