

PRODUCT INFORMATION



Histone H2A Type 1 (human, recombinant)

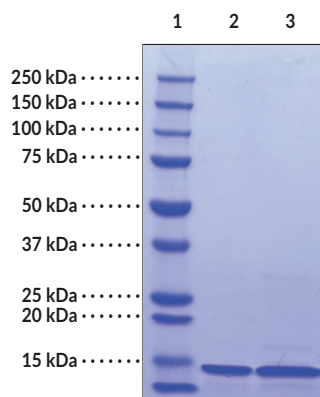
Item No. 11080

Overview and Properties

Synonyms:	H2A Clustered Histone 11, H2A Histone Family, Member P, H2A.1, H2AC11, H2AFP, HIST1H2AG, Histone H2A/ptl
Source:	Recombinant human histone H2A type 1 expressed in <i>E. coli</i>
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:	A solution in water
Protein Concentration:	batch specific mg/ml

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

Image



Lane 1: MW Markers

Lane 2: Histone H2A Type 1 (2 µg)

Lane 3: Histone H2A Type 1 (4 µg)

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

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 H2A type 1 (H2A.1) is a variant of the histone H2A protein that is encoded by *H2AC11*, previously known as *HIST1H2AG*, in humans.¹ Histone H2A is a core histone that forms a dimer with histone H2B.² Two histone H2A/H2B dimers form an octameric nucleosome with a histone H3/H4 tetramer, around which DNA wraps, allowing it to be condensed. Histone H2A can be post-translationally modified *via* methylation of the arginine at position 3 by protein arginine methyltransferase 1 (PRMT1), PRMT5, or PRMT6, which is associated with both transcriptional activation and repression.³ When methylated by PRMT7, it is associated with DNA damage repair. The arginine residue at position 3 of histone H2A is also subject to citrullination by protein arginine deiminase 4 (PAD4). H2A.1 levels are higher in peripheral blood mononuclear cells (PBMCs) isolated from patients with active systemic lupus erythematosus (SLE) compared to those with stable SLE, rheumatoid arthritis (RA), or non-SLE non-RA controls.⁴ Cayman's Histone H2A Type 1 (human, recombinant) protein can be used for Western blot and ELISA applications.

References

1. Marzluff, W.F., Gongidi, P., Woods, K.R., *et al.* The human and mouse replication-dependent histone genes. *Genomics* **80**(5), 487-498 (2002).
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).
4. Wang, L., Dai, Y., Qi, S., *et al.* Comparative proteome analysis of peripheral blood mononuclear cells in systemic lupus erythematosus with iTRAQ quantitative proteomics. *Rheumatol. Int.* **32**(3), 585-593 (2012).

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