

Mononucleosomes Recombinant Protein | H2AFZ recombinant protein

Recombinant Mononucleosomes (H2A.Z)-biotinylated

CATALOG # AAA59762	HOST E Coli
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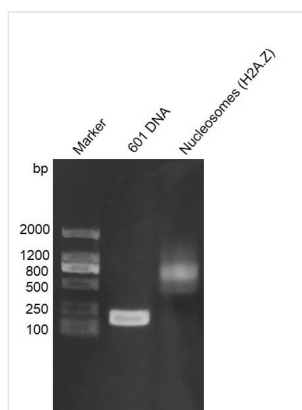
PRODUCT SYNONYMS

Mononucleosomes; Recombinant Mononucleosomes (H2A.Z)-biotinylated; H2A Histone Family Member Z; H2A/Z; H2AZ; H2AFZ recombinant protein

PRODUCT SPECIFICATIONS

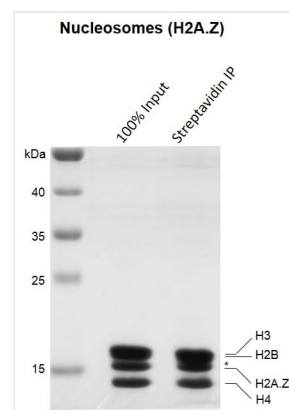
Host	E Coli
Form/Format	Recombinant Mononucleosomes (H2A.Z)-biotinylated (20ug protein + 20ug DNA) are supplied in 10mM Tris-HCl, pH8.0, 1mM EDTA, 2mM DTT and 20% glycerol. Please refer to product insert upon arrival for lot-specific concentration.
Protein Species	Human
Conjugation	Biotinylated
Protein Details	Recombinant Mononucleosomes (H2A.Z)-biotinylated, consist of 167 bp of 601 DNA with a 5' biotin tag and two molecules each of histones H2A.Z that includes amino acids 1-128 (end)(accession number NP_002097.1), H2B that includes amino acids 1-126 (end)(accession number NP_003509.1), H3 that includes amino acids 1-136 (end)(accession number NP_003520.1), and H4 that includes amino acids 1-103 (end)(accession number NP_003539.1). All of these histones were expressed in E Coli cells.
Notes	Recombinant Mononucleosomes (H2A.Z)-biotinylated are suitable for use as substrates in the study of enzyme kinetics, inhibitor screening, and selectivity profiling.
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80 degree C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. Shipping Temp: Dry Ice

IMAGES



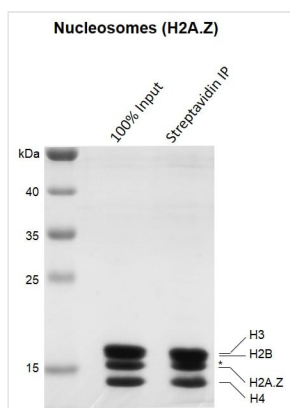
Application Data

Recombinant Mononucleosomes (H2A.Z) - biotinylated, DNA gel. Biotinylated mononucleosomes (H2A.Z) were run on a 2% agarose gel and stained with ethidium bromide. Lane 1: DNA marker. Lane 2: free 601 DNA. Lane 3: Intact mononucleosomes. Intact mononucleosomes migrate much higher than free 601 DNA. The agarose gel result shows that almost all of 601 DNA wraps histone octamers to form mononucleosomes. Nucleosomes = Mononucleosomes.



SDS-PAGE

Streptavidin pull-down for Recombinant Mononucleosomes (H2A.Z) - biotinylated. Mononucleosomes (H2A.Z) were pulled down by streptavidin beads. Input mononucleosomes (Lane 1) and the mononucleosomes pulled down by streptavidin (Lane 2) were run on a 12.5% SDS-PAGE gel and stained with Coomassie Blue. The SDS-PAGE gel result shows that almost all of biotinylated mononucleosomes (H2A.Z) are pulled down by streptavidin beads. * indicates streptavidin. Nucleosomes = Mononucleosomes.



SDS-PAGE

Recombinant Mononucleosomes (H2A.Z) - biotinylated, protein gel. 12.5% SDS-PAGE gel stained with Coomassie Blue Purity: ? 90%

ADDITIONAL INFORMATION

Related Product Information for H2AFZ recombinant protein

Short Description: Nucleosomes comprise the smallest subunit of chromatin; they consist of 147 bp of DNA wrapped around an octamer of core histone proteins (H2A, H2B, H3 and H4). Therefore, nucleosomes are more physiologically relevant substrates than histones and histone-derived peptides for use in in vitro studies. More importantly, some histone methyltransferases are significantly more active, as well as specific, when using nucleosomal substrates in HMT assays, such as DOT1L and NSD family enzymes. Nucleosomes are also widely used in histone methyltransferase screening assays to identify small molecular inhibitors for drug discovery.

Background: In vivo, the nucleosome is the basic structural unit of chromatin. It is comprised of about 146 bp of DNA wrapped around a core of eight histones of four different types: H2A, H2B, H3 and H4. Histones are subject to post-translational modifications, such as methylation, acetylation, phosphorylation, mono-ubiquitination, etc. Histone modifications influence multiple chromatin templated processes such as gene transcription, DNA repair and recombination. Besides the "major" histones, there are some histone variants in specific regions of chromatin or in specific cell types. Histone variants are involved in multiple biological processes including chromosome segregation, DNA repair, transcriptional regulation and mRNA processing. H2A.Z (also known as H2AFZ, Histone Family Member Z) is a histone H2A family member. It is highly conserved from yeast to human, with 90% of its primary sequence preserved among different species, showing only 60% homology with canonical histone H2A. H2A.Z is found in approximately 10% of mammalian nucleosomes. H2A.Z has been one of the most studied H2A variants in recent years. It plays an important role in different biological processes such as DNA replication, DNA repair, transcription regulation, cell cycle, spermatogenesis, chromosome segregation, centromere structure and maintenance of heterochromatic/euchromatic status. However, different studies reported diverse conclusions in the nucleosome stability and transcriptional regulation. The contradictory roles of H2A.Z in vivo might be explained by different combinations of H2A.Z with other epigenetic regulators, PTMs on H2A.Z and interaction with chromatin binding proteins. Nucleosomes are more physiologically relevant substrates than histones and histone-derived peptides for in vitro studies. More importantly, some histone methyltransferases are significantly more active, as well as specific, when using nucleosomal substrates in HMT assays, such as DOT1L and NSD family enzymes. Nucleosomes are also widely used in histone methyltransferase screening assays to identify small molecular inhibitors for drug discovery.

Product Categories/Family for H2AFZ recombinant protein

[Recombinant Proteins](#); [Histone](#)

NCBI AND UNIPROT INFORMATION

NCBI GI #	4504255
NCBI GeneID	3015
NCBI Accession #	NP_002097.1 ; NP_003509.1 ; NP_003520.1 ; NP_003539.1
NCBI GenBank Nucleotide #	NM_002106.3
UniProt Accession #	P0C0S5 ; P17317 ; Q6I9U0 ; B2RD56
Molecular Weight	13,553 Da

NCBI Official Full Name	histone H2A.Z
NCBI Official Synonym Full Names	H2A histone family, member Z
NCBI Official Symbol	H2AFZ
NCBI Official Synonym Symbols	H2AZ; H2A.z; H2A/z; H2A.Z-1
NCBI Protein Information	histone H2A.Z; H2AZ histone
UniProt Protein Name	Histone H2A.Z
UniProt Gene Name	H2AFZ
UniProt Synonym Gene Names	H2AZ; H2A/z
UniProt Entry Name	H2AZ_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/h2afz-recombinant-protein-e-coli/59762>