

Mononucleosomes Recombinant Protein | HIST1H1C recombinant protein

Recombinant Mononucleosomes (H1.2)

CATALOG # AAA60199	HOST E Coli
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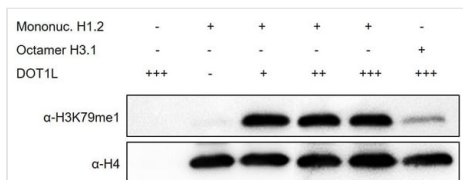
PRODUCT SYNONYMS

Mononucleosomes; Recombinant Mononucleosomes (H1.2); HIST1H1C recombinant protein

PRODUCT SPECIFICATIONS

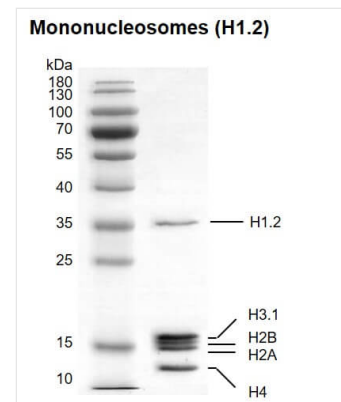
Host	E Coli
Form/Format	Recombinant Mononucleosomes (H1.2)(20ug protein + 20ug DNA) are supplied in 10mM Tris-HCl pH8.0, 1mM EDTA, 2mM DTT, and 20% glycerol.
Protein Species	Human
Protein Details	Recombinant Mononucleosomes (H1.2) consist of a 204 bp of 601 DNA (48 bp and 10 bp on 5' and 3' of 146 bp core DNA, respectively) and two molecules each of histones H2A that includes amino acids 1-130 (end)(accession number NM_003512), H2B that includes amino acids 1-126 (end)(accession number NM_003518), H3.1 that includes amino acids 1-136 (end)(accession number NM_003529), and H4 that includes amino acids 1-103 (end)(accession number NM_003548), and histone H1.2 that includes amino acids 1-213 (end)(accession number NP_005310.1). All of these histones were expressed in E Coli cells.
Notes	Recombinant Mononucleosomes (H1.2) are suitable for use as substrate of enzymatic assay or other biochemical assay.
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



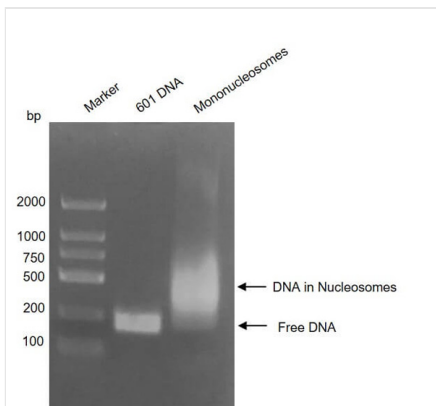
WB (Western Blot)

Western blot assay for Recombinant Mononucleosomes (H1.2) 2 ug Recombinant Mononucleosomes were incubated with 0, 12.5, 25, 50 ng DOT1L respectively in reaction buffer containing 50 mM Tris-HCl pH 8.6, 0.02% Triton X-100, 2 mM MgCl₂, 1 mM TCEP and 50 uM SAM for 2 hr at room temperature. Half of the reactions were run on a 12.5% SDS-PAGE gel and detected with H3K79me1 antibody and H4 antibody, respectively. DOT1L protein and Recombinant Histone Octamers were used as controls. H4 was detected as the loading control. The result shows that mononucleosomes are better than octamers as substrates for DOT1L.



SDS-PAGE

Recombinant Mononucleosomes (H1.2) protein gel 13% SDS-PAGE with Coomassie Blue staining Purity: ≥95%



Application Data

Recombinant Mononucleosomes (H1.2) DNA gel. Recombinant Mononucleosomes (H1.2) were run on a 2% agarose gel and stained with ethidium bromide. Lane 1: DNA marker. Lane 2: 601 DNA. Lane 3: Intact mononucleosomes (H1.2). Intact mononucleosomes (H1.2) migrated much higher than free 601 DNA. The agarose gel result shows almost all of 601 DNA wrap histone octamers to form nucleosomes.

ADDITIONAL INFORMATION

Related Product Information for HIST1H1C recombinant protein

Short Description: Histones are basic nuclear proteins responsible for nucleosome structure of the chromosomal fiber in eukaryotes. Two molecules of each of the four core histones (H2A, H2B, H3, and H4) form an octamer, around which approximately 146 bp of DNA is wrapped in repeating units, called nucleosomes. In vivo, histones are wrapped around by DNA in chromatin. Therefore, 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. The called linker histone, H1, binds to linker DNA between nucleosomes forming the macromolecular structure known as the chromatin fiber. So it is necessary for the condensation of nucleosome chains into higher-order structured fibers. It can also act as a regulator of individual gene transcription through chromatin remodeling, nucleosome spacing and DNA methylation. Histone H1.2 is a replication-dependent histone that is a member of the histone H1 family.

Background: Histones are basic nuclear proteins responsible for nucleosome structure of the chromosomal fiber in eukaryotes. Two molecules of each of the four core histones (H2A, H2B, H3, and H4) form an octamer, around which approximately 146 bp of DNA is wrapped in repeating units, called nucleosomes. In vivo, histones are wrapped around by DNA in chromatin. Therefore, 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. The called linker histone, H1, binds to linker DNA between nucleosomes forming the macromolecular structure known as the chromatin fiber. So it is necessary for the condensation of nucleosome chains into higher-order structured fibers. It can also act as a regulator of individual gene transcription through chromatin remodeling, nucleosome spacing and DNA methylation. Histone H1.2 is a replication-dependent histone that is a member of the histone H1 family.

Product Categories/Family for HIST1H1C recombinant protein

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

NCBI AND UNIPROT INFORMATION

NCBI GI #	4885375
NCBI GeneID	3006
NCBI Accession #	NP_005310.1
NCBI GenBank Nucleotide #	NM_003512
UniProt Accession #	P16403 ; A8K4I2

Molecular Weight	21,365 Da
NCBI Official Full Name	histone H1.2
NCBI Official Synonym Full Names	histone cluster 1 H1 family member c
NCBI Official Symbol	HIST1H1C
NCBI Official Synonym Symbols	H1C; H1.2; H1F2; H1s-1
NCBI Protein Information	histone H1.2
UniProt Protein Name	Histone H1.2
UniProt Gene Name	HIST1H1C
UniProt Synonym Gene Names	H1F2

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/hist1h1c-recombinant-protein-e-coli/60199>