

Mononucleosomes H3K4me2 Recombinant Protein | H3K4me2 recombinant protein

Recombinant Mononucleosomes H3K4me2 (EPL)-biotin

CATALOG # AAA60122	HOST E Coli
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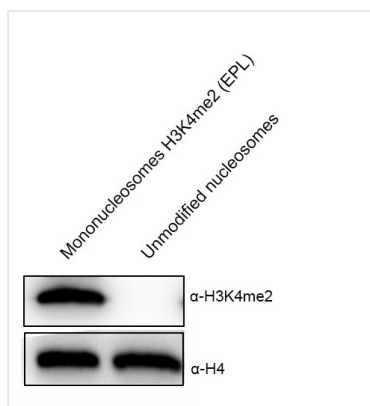
PRODUCT SYNONYMS

Mononucleosomes H3K4me2; Recombinant Mononucleosomes H3K4me2 (EPL)-biotin; H3K4me2 recombinant protein

PRODUCT SPECIFICATIONS

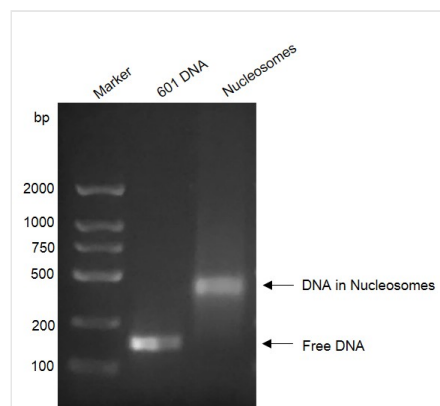
Host	E Coli
Form/Format	Recombinant Mononucleosomes H3K4me2 (EPL)-biotin (20ug protein + 20ug DNA) are supplied in 10mM Tris-HCl pH8.0, 1mM EDTA, 2mM DTT and 20% glycerol.
Protein Species	Human
Conjugation	Biotinylated, Methylated
Notes	Recombinant Mononucleosomes H3K4me2 (EPL)-biotin are suitable for use 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



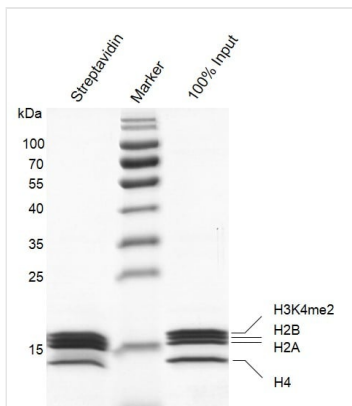
WB (Western Blot)

Western Blot analysis for Recombinant Mono-nucleosomes H3K4me2 (EPL) – biotin. Recombinant Mononucleosomes H3K4me2 (EPL) - biotin (Lane 1) and unmodified nucleosomes (Lane 2) were detected with anti-H3K4me2 antibody and anti-H4 antibody, respectively. H3 was detected as loading control. Only Recombinant Mononucleosomes H3K4me2 (EPL) - biotin can be detected by anti-H3K4me2 antibody.



Application Data

Recombinant Mononucleosomes H3K4me2 (EPL) - biotin DNA gel. Mononucleosomes H3K4me2 (EPL) - biotin were run on a 2% agarose gel and stained with ethidium bromide. Lane 1: DNA marker. Lane 2: 601 DNA. Lane 3: Intact nucleosome. Intact nucleosomes migrate much higher than free 601 DNA. The agarose gel result shows almost all of 601 DNA wraps histone octamers to form nucleosomes.



SDS-PAGE

Streptavidin pull-down for Recombinant Mononucleosomes H3K4me2 (EPL) - biotinylated. Recombinant Mononucleosomes H3K4me2 (EPL) - biotin were pulled down by streptavidin beads. Input nucleosomes (Lane 1) and the nucleosomes (Lane 2) pulled down by streptavidin were run on a 12.5% SDS-PAGE gel and stained with Commassie blue. The SDS-PAGE gel result shows that almost all of biotinylated nucleosomes H3K4me2 are pulled down by streptavidin beads. The purity of mononucleosomes H3K4me2 (EPL) - biotin is ~95%.

ADDITIONAL INFORMATION

Related Product Information for H3K4me2 recombinant protein	Short Description: Recombinant Mononucleosomes H3K4me2 (EPL)-biotin consist of a 167 bp of 601 DNA with 5'-biotin tag and two molecules each of histones H2A that includes amino acids 1-130 (end)(accession number NP_003503.1), H2B that includes amino acids 1-126 (end)(accession number NP_003509.1), H3.2 that includes amino acids 1-136 (end)(accession number NP_066403.2) with dimethylation at lysine 4, and H4 that includes amino acids 1-103 (end)(accession number NP_003539.1). All of these histones were expressed in E Coli. The molecular weight of histone octamer is ~108 kDa. H3K4me2 (Histone H3 dimethyl Lys4) protein is generated using expressed protein ligation (EPL) technology. Truncated human Histone H3.2 is produced in E Coli and purified using FPLC. The purified protein is subsequently ligated to an N-terminal histone tail peptide containing dimethyl lysine 4 via a native peptide bond. 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, 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.
Product Categories/Family for H3K4me2 recombinant protein	Recombinant Proteins ; Histone

NCBI AND UNIPROT INFORMATION

NCBI GI #	4504245
NCBI GeneID	8334
NCBI Accession #	NP_003503.1; NP_003509.1; NP_066403.2; NP_003539.1
NCBI GenBank Nucleotide #	NM_003512.3
UniProt Accession #	Q93077; O00775; O00776; O00777; O00778; Q540R1; B2R4F7
Molecular Weight	14,105 Da
NCBI Official Full Name	histone H2A type 1-C
NCBI Official Synonym Full Names	histone cluster 1 H2A family member c

NCBI Official Symbol	HIST1H2AC
NCBI Official Synonym Symbols	H2A/I; H2AFL; dJ221C16.4
NCBI Protein Information	histone H2A type 1-C
UniProt Protein Name	Histone H2A type 1-C
UniProt Gene Name	HIST1H2AC
UniProt Synonym Gene Names	H2AFL

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/hist1h2ac-recombinant-protein-e-coli/60122>