

Polynucleosomes Recombinant Protein

Recombinant Polynucleosomes (H3.1)

CATALOG # AAA59700	HOST E Coli
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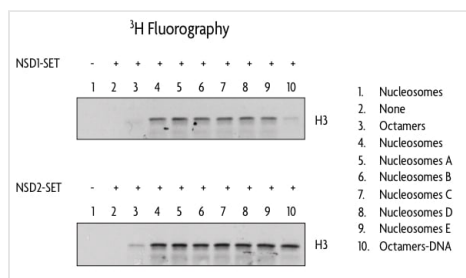
PRODUCT SYNONYMS

Polynucleosomes; Recombinant Polynucleosomes (H3.1); Polynucleosomes recombinant protein

PRODUCT SPECIFICATIONS

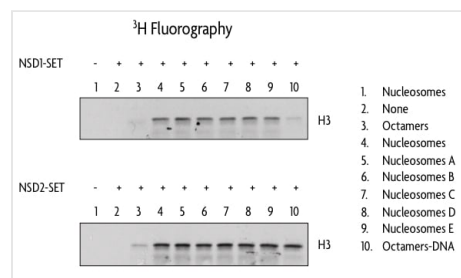
Host	E Coli
Purity/Purification	The recombinant protein is >95% pure by SDS-PAGE..
Form/Format	Recombinant Polynucleosomes (H3.1)(20ug protein + 24ug DNA) are supplied at a concentration of 0.55ug/ul in 10mM Tris-HCl, pH8.0, 1mM EDTA, 2mM DTT and 20% glycerol.
Protein Species	Human
Protein Details	Recombinant Polynucleosomes (H3.1), Human consists of 5000 bp of DNA (plasmid pG5E4) 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). Plasmid pG5E4 contains 9 of 5S rDNA nucleosome positioning sequences of L. variegatus, 5 of GAL4 binding sites and E4 promoter. Every 5S rDNA can wrap one histone octamer to form a nucleosome. 5 of GAL4 binding sites and E4 promoter can wrap histone octamers to form dinucleosomes. A pG5E4 plasmid can warp histone octamers to form 11 nucleosomes.
Notes	Recombinant Polynucleosomes (H3.1) are suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling. HMT Assay Conditions: 50mM TrisCl, pH 8.6, 0.02% Triton X-100, 2mM MgCl2, 1mM TCEP, 100uM SAM, 30 ng/ul Recombinant Polynucleosomes (H3.1), 30 ng/ul DOT1L (1-416 aa) at 2 hours at room temperature. Activity was detected by fluorography.
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



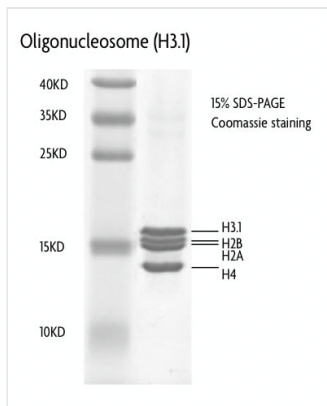
Application Data

Recombinant Polynucleosomes (H3.1) protein activity assay. Results show that polynucleosomes are better substrates than octamers for NSD1-SET and NSD2-SET. Lanes 5-9 represent polynucleosomes that have been subjected to subsequent freeze-thaw cycles to demonstrate their stability. Activity was detected by fluorography.



Application Data

Recombinant Polynucleosomes (H3.1) protein DNA Gel-shift assay Polynucleosomes (H3.1) and free plasmid DNA were run on a 1% agarose gel and stained with ethidium bromide. Intact polynucleosomes migrate higher than free DNA, thus the DNA resolves at a higher molecular weight when nucleosome-bound. * represents the mixture of DNA and histone octamers (incorrect assembly).



SDS-PAGE

Recombinant Polynucleosomes (H3.1) protein gel. Recombinant Polynucleosomes (H3.1) run on an SDS-PAGE gel and stained with Coomassie Blue.

ADDITIONAL INFORMATION

Related Product Information for Polynucleosomes recombinant protein

Short Description: Our Recombinant Polynucleosomes (H3.1) consists of 5000 bp of DNA (plasmid) 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). Recombinant Polynucleosomes (H3.1) was generated in E Coli, and has an observed molecular weight of 108 kDa. 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.

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 Polynucleosomes recombinant protein

Recombinant Proteins; Histone

NCBI AND UNIPROT INFORMATION

NCBI GenBank Nucleotide

NM_003512

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/polynucleosomes-recombinant-protein-e-coli/59700>