Recombinant Mononucleosomes H3S10ph (EPL) - biotin

Catalog No: 81164, 81864
Lot No: 16518001
Expressed In: *E. coli*

Quantity: 20, 1000 µg
Concentration: 0.53 µg/µl
Source: Human

Buffer Contents: Recombinant Mononucleosomes H3S10ph (EPL) – biotin (20 µg protein + 20 µg DNA) are supplied in 10 mM Tris-HCl pH 8.0, 1 mM EDTA, 2 mM DTT, and 20% glycerol.

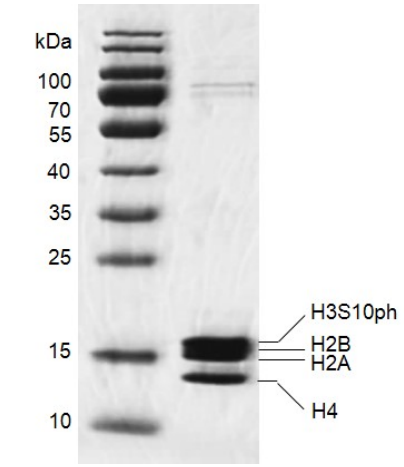
Background: *In vivo*, histones are wrapped around by DNA in chromatin. Therefore, nucleosomes are more physiologically relevant substrates than histones and histone-derived peptides for in vitro studies. More importantly, some histone methyltransferases are significantly more active, as well as specific, 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.

Protein Details: Recombinant Mononucleosomes H3S10ph (EPL) - biotin consist of a 167 bp of 601 DNA 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 phosphorylation at serine 10, and H4 that includes amino acids 1-103 (end) (accession number NP_003539.1). All of these histones were expressed in *E. coli* cells. The molecular weight of histone octamer is ~108 kDa.

H3S10ph (Histone H3 phosphoryl Ser10) 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 a N-terminal histone tail peptide containing phosphoryl serine 10 via a native peptide bond.

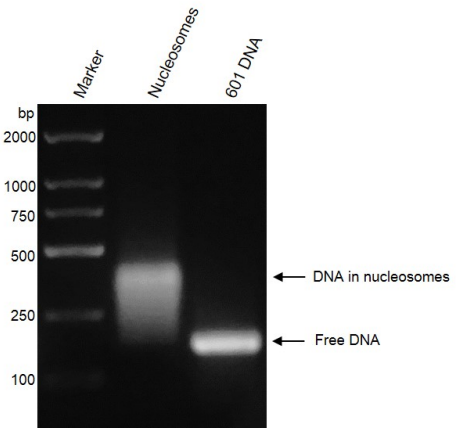
Application Notes: Recombinant Mononucleosomes H3S10ph (EPL) - biotin are suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.



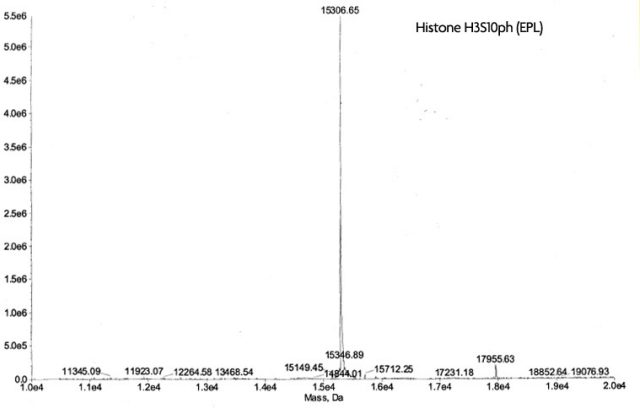
Recombinant Mononucleosomes H3S10ph (EPL) - biotin, SDS PAGE gel

13% SDS-PAGE gel, stained with Coomassie blue.
Purity: ≥ 92%



Recombinant Mononucleosomes H3S10ph (EPL) - biotin, DNA gel

Mononucleosomes H3S10ph (EPL) - biotin, were run on a 2% agarose gel and stained with ethidium bromide. Lane 1: DNA marker. Lane 2: Intact mononucleosome H3S10ph - biotin. Lane 3: 601 DNA. Intact mononucleosome H3S10ph - biotin migrated higher than free 601 DNA. The agarose gel result shows almost all of 601 DNA wraps histone octamers to form nucleosomes.



Mass Spec analysis for Recombinant Mononucleosomes H3S10ph (EPL) - biotin

Histone H3S10ph (EPL) - biotin protein was analyzed by ESI-TOF mass spectrometry. Expected mass = 15306 Da. Determined mass = 15306 Da.