

## Recombinant Mononucleosomes H3R2/8/17 citrul (EPL)

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**Catalog No:** 81165, 81865

**Lot No:** 18218001

**Expressed In:** *E. coli*

**Quantity:** 20, 1000 µg

**Concentration:** 0.53 µg/µl

**Source:** Human

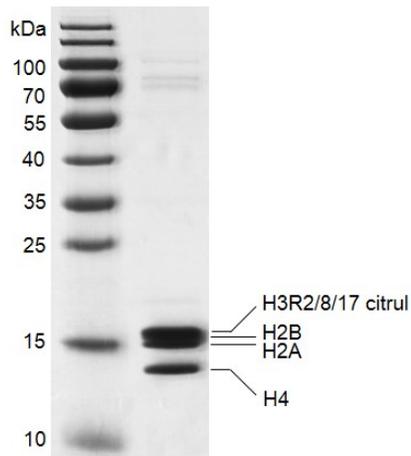
**Buffer Contents:** Recombinant Mononucleosomes H3R2/8/17 citrul (EPL) (20 µg protein + 20 µg DNA) are supplied at a protein concentration of 0.53 mg/ml in 10 mM Tris-HCl pH 8.0, 1 mM EDTA, 2 mM DTT, and 20% glycerol.

**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.

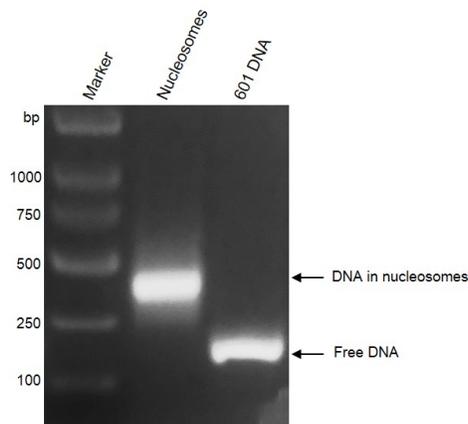
**Protein Details:** Recombinant Mononucleosomes H3R2/8/17 citrul (EPL) consist of a 167 bp of 601 DNA and two molecules each of histones H2A that includes amino acids 1-130 (end) (accession number NP\_003503.1), H2B that includes amino acids 1-126 (end) (accession number NP\_003509.1), H3.2 that includes amino acids 1-136 (end) (accession number NP\_066403.2) with citrullination at arginine 2, arginine 8 and arginine 17, 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. H3R2/8/17 citrul (Histone H3 citrullyl Arg2/8/17) 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 citrulline 2/8/17 via a native peptide bond.

**Application Notes:** Recombinant Mononucleosomes H3R2/8/17 citrul (EPL) are suitable for use in the study of enzyme kinetics, inhibitor screening, and selectivity profiling.

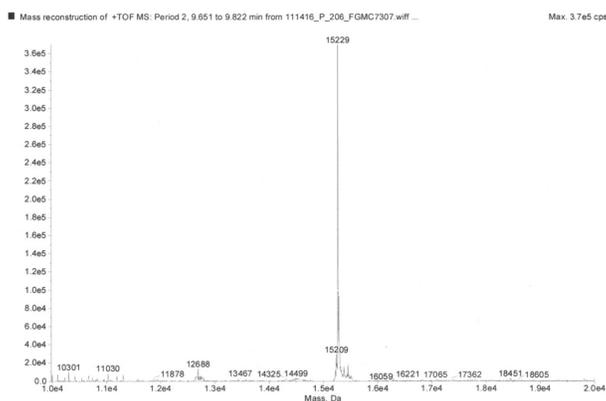
**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product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



**Recombinant Mononucleosomes H3R2/8/17 citrul (EPL) SDS PAGE gel**  
 13% SDS-PAGE gel, stained with Coomassie blue.  
 Purity:  $\geq 92\%$



**Recombinant Mononucleosomes H3R2/8/17 citrul (EPL) DNA gel**  
 Mononucleosomes H3R2/8/17 citrul were run on a 2% agarose gel and stained with ethidium bromide. Lane 1: DNA marker. Lane 2: Intact mononucleosome H3R2/8/17 citrul Lane 3: 601 DNA. Intact mononucleosome H3R2/8/17 citrul 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 H3R2/8/17 citrul (EPL)**  
 Histone H3R2/8/17 citrul (EPL) protein was analyzed by ESI-TOF mass spectrometry. Expected mass = 15229 Da. Determined mass = 15229 Da.