RNA pol II CTD phospho Ser7 antibody (mAb)

Catalog Nos: 61087, 61987, 61088
RRID: AB_2687452
Clone: 4E12
Isotype: IgG1
Application(s): ChIP, ChIP-Seq, ICC, IF, IP, WB
Reactivity: Human

Quantities: 100 µg, 50 µg, 10 µg
Purification: Protein G Chromatography
Host: Rat
Concentration: 1 µg/µl
Molecular Weight: 240 kDa

Background: RNA pol II (**RNA polymerase II**) is responsible for synthesizing messenger RNA in eukaryotes. **RNA pol II** contains a carboxy terminal domain composed of heptapeptide repeats that are essential for polymerase activity. These repeats contain serine and threonine residues that are phosphorylated in actively transcribing RNA polymerase. In addition, **RNA pol II**, in combination with several other polymerase subunits, form the DNA binding domain of the polymerase, a groove in which the DNA template is transcribed into RNA.

During the transcription cycle, the CTD of the large subunit of **RNA pol II** is reversibly phosphorylated. **RNA pol II** containing unphosphorylated **CTD** is recruited to the promoter, whereas the hyperphosphorylated **CTD** form is involved in active transcription. Phosphorylation occurs at two sites within the heptapeptide repeat, at serine 2, serine 5 and serine 7. **RNA pol II Serine 7 phosphorylation** is confined to promoter regions and is necessary for the initiation of transcription.

Immunogen: This RNA pol II CTD phospho Ser7 antibody was raised against a peptide containing the RNA pol II CTD sequence phosphorylated at serine 7.

Buffer: Purified IgG in 70 mM Tris (pH 8), 105 mM NaCl, 31 mM glycine, 0.07 mM EDTA, 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

Application Notes:
Applications Validated by Active Motif:
ChIP: 5-10 µg per ChIP
ChIP-Seq: 5-10 µg each

Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.

RNA pol II CTD phospho Ser7 antibody (mAb) tested by ChIP-Seq.
ChIP was performed using the ChIP-IT® High Sensitivity Kit (Cat. No. 53040) with chromatin from 2.3 million HL-60 cells and 4 ul of antibody. ChIP DNA was sequenced on the Illumina HiSeq and 20 million sequence tags were mapped to identify Pol II phospho Ser7 binding. The image shows a 350,000 base pair region on chromosome 1 with the expected enrichment at gene promoters.