RNA pol II CTD monomethyl Lys7 antibody (mAb)

A C T I V E 🚺 M O T I F®

Catalog Nos: 65691, 65692 RRID: AB_3216348 Clone: 1F5 Application(s): ChIP, ChIP-Seq, IP, WB Reactivity: Human Quantities: 100 µg, 10 µg Purification: Protein G Chromatography Host: Rat Isotype: IgG2a Molecular Weight: 240 kDa

Background: Genome-wide profiling revealed high levels of K7me1/2 marks at the transcriptional start site of genes for sense and antisense transcribing RNAPII. The new K7 modifications further expand the mammalian CTD code to allow regulation of differential gene expression. In analogy, it appears likely that the various modifications of K7 residues identified in this analysis may similarly contribute to fine tuning of gene expressing by RNAPII, and that these modifications are placed in K7 residues of CTD dependent on cell signaling and epigenetic programming of cells.

Immunogen: This antibody was raised against a peptide containing dimethyl-lysine 7 of human RNA Pol II CTD.

Buffer: PBS containing 0.05% BSA and 0.05% sodium azide. Sodium azide is highly toxic.

Application Notes:

Applications Validated by Active Motif: ChIP-Seq: 10 µg per ChIP IP: 5 µg per IP WB*: 0.5 - 2 µg/ml

*Note: Many chromatin-bound proteins are not soluble in a low salt nuclear extract and fractionate to the pellet. Therefore, we recommend a High Salt / Sonication Protocol when preparing nuclear extracts for Western blot.

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.

Application Key: ChIP = Chromatin Immunoprecipitation; FACS = Flow Cytometry; IF = Immunofluorescence; IHC = Immunohistochemistry; IP = Immunoprecipitation; WB = Western Blot





- 71 - 55 - 41 **RNA pol II CTD K7me1 antibody (pAb) tested by ChIP-Seq.** ChIP was performed using the ChIP-IT[®] High Sensitivity Kit (Cat. No. 53040) with 30 μ g of chromatin from Raji cells and 10 μ g of antibody. ChIP DNA was sequenced on the Illumina HiSeq and 10.9M sequence tags were mapped to identify RNA pol II binding sites across a region of chromosome

RNA pol II CTD monomethyl Lys7 antibody tested by Western blot. 20 μg of K562 nuclear extract* was run on SDS-PAGE and probed with antibody at 0.5 μg/ml.
 RNA pol II CTD monomethyl Lys7 antibody tested by Immunoprecipitation.



5 μ g of antibody was used to immunoprecipitate RNA pol II CTD monomethyl Lys7 from 300 μ g of K562 nuclear extract, which was then run on SDS-PAGE and probed with the same antibody at 3 μ g/ml.



RNA pol II CTD monomethyl Lys7 antibody tested for specificity Biotinylated peptides containing various RNA Pol II CTD Lysine 7 modifications were captured onto wells of a Streptavidin-coated plate and then incubated with RNA Pol II CTD K7me1 antibody at 1 µg/mL. Peptidebound antibody was detected using anti-rat IgG HRP followed by addition of peroxidase substrate and read at A405.