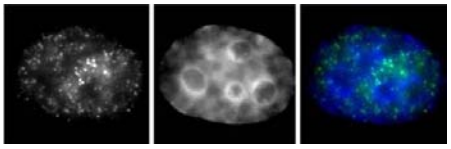
RNA pol II CTD phospho Ser7 antibody (mAb)

Catalog Nos: 61703, 61704
RRID: AB_2793742
Clone: 3D4A12
Isotype: IgG2b
Application(s): ICC, IF, WB
Reactivity: Human

Quantities: 100 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.



RNA pol II phospho Ser7 antibody (mAb) (Clone 3D4A12) tested by Immunofluorescence.
Left: HeLa cell stained with RNA pol II CTD phospho Ser7 antibody (mAb). Middle: DAPI. Right: Merge.

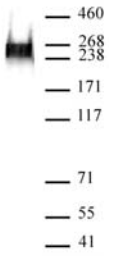
Immunogen: This antibody was raised against a peptide containing the RNA pol II CTD sequence phosphorylated at serine 7.

Buffer: Purified IgG in PBS with 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

Application Notes:
Applications Validated by Active Motif:
ICC/IF: 2 - 10 µg/ml dilution
WB*: 0.5 - 2 µg/ml dilution

The addition of 0.1% Tween 20 in the blocking buffer and primary antibody incubation buffer is recommended to aid in detection by Western blot. Individual optimization may be required.

*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.



RNA pol II phospho Ser7 antibody (mAb) (Clone 3D4A12) tested by Western blot.
HeLa nuclear extract (40 µg per lane) probed with RNA pol II phospho Ser7 antibody (mAb) at a 2 µg/ml dilution.

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.