

RNA pol II CTD phospho Ser2 antibody (pAb)

Catalog Nos: 39563, 39564

RRID: AB_2793259

Isotype: IgG

Application(s): IP, WB

Reactivity: Human

Volumes: 200 µl, 10 µl

Purification: Affinity Purified

Host: Rabbit

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 phosphorylated at serine 2 is enriched over the gene body and is associated with transcriptional elongation.

Immunogen: This RNA pol II CTD phospho Ser2 antibody was raised against a peptide containing the RNA Pol II CTD sequence phosphorylated at serine 2.

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:

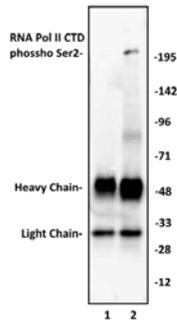
IP: 5 - 10 µl per IP

WB: 1:500 - 1:2,000 dilution

For RNA pol II CTD phospho Ser2, we also offer AbFlex® RNA pol II CTD phospho Ser2 Recombinant Antibody (rAb). For details, see Catalog No. 91115.

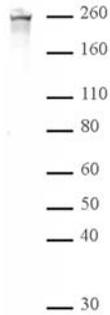
Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product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

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



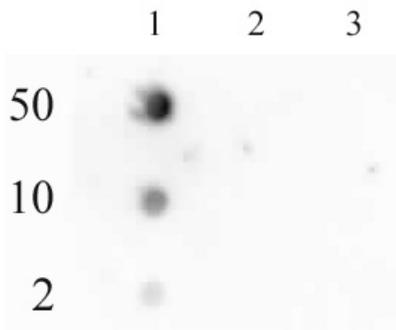
RNA Pol II CTD phospho Ser2 antibody (pAb) tested by Immunoprecipitation.

10 μ l of RNA Pol II CTD phospho Ser2 antibody was used to immunoprecipitate RNA Pol II CTD phospho Ser2 from 250 μ g of HeLa nuclear cell extract (lane 2). 10 μ l of rabbit IgG was used as a negative control (lane 1). The immunoprecipitated protein was detected by Western blotting using the RNA Pol II CTD phospho Ser2 antibody at a dilution of 1:1,000.



RNA Pol II CTD phospho Ser2 antibody (pAb) tested by Western blot.

HeLa cell nuclear extract (20 μ g per lane) was probed with RNA Pol II CTD phospho Ser2 pAb at a dilution of 1:2,000.



RNA Pol II CTD phospho Ser2 antibody (pAb) tested by dot blot analysis.

Dot blot analysis was used to confirm the specificity of RNA Pol II CTD phospho Ser2 pAb. Peptides corresponding to the immunogen and related peptides were spotted onto PVDF and probed with the antibody at a dilution of 1:2,000. The amount of peptide (picomoles) spotted is indicated next to each row.

Lane 1: Phospho Ser2 of RNA Pol II CTD peptide.

Lane 2: Unmodified RNA Pol II CTD peptide.

Lane 3: Phospho Ser5 of RNA Pol II CTD peptide.