

## RNA pol II CTD phospho Tyr1 antibody (mAb)

**Catalog Nos:** 61383, 61983, 61384

**Clone:** 3D12

**Isotype:** IgG1

**Application(s):** ChIP, ICC, IF, IP, WB

**Reactivity:** Human, Wide Range Predicted

**Quantities:** 100 µg, 50 µg, 10 µg

**Purification:** Protein G Chromatography

**Host:** Rat

**Concentration:** 1 µg/µl

**Molecular Weight:** 210 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 sites within the heptapeptide repeat, at serine 2, serine 5, serine 7 and tyrosine 1. **RNA pol II Tyrosine 1 phosphorylation** is found during elongation and appears to activate transcription by suppressing **RNA pol II** termination.

**Immunogen:** This antibody was raised against a synthetic peptide containing the RNA Pol II heptad repeat consensus sequence phosphorylated at tyrosine 1.

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

### Application Notes:

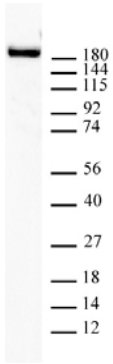
Applications Validated by Active Motif:

WB\*: 1 – 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. In addition, we recommend the addition of 0.05% Tween 20 to all blocking solutions to reduce background.

This antibody is also available as an AbFlex<sup>®</sup> engineered recombinant antibody. For details on the corresponding AbFlex Recombinant Antibody, see Catalog No. 91219.

**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 Tyr1 mAb tested by Western blot.**

20 µg of HeLa cell nuclear extract was run on SDS-PAGE and probed with antibody at 2 µg/ml.