

## RNA pol II antibody (mAb)

**Catalog Nos:** 39097, 39497

**RRID:** AB\_2732926

**Clone:** 4H8

**Application(s):** ChIP, ChIP-Seq, ICC, IF, WB

**Reactivity:** Budding Yeast, C. elegans, Human, Mouse, Rat

**Volumes:** 200 µl, 50 µl

**Purification:** Affinity Purified

**Host:** Mouse

**Isotype:** IgG1

**Molecular Weight:** 217 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.

**Immunogen:** This RNA pol II antibody was raised against a synthetic peptide YSPTSpPS corresponding to human RNA pol II. It recognizes both the phosphorylated and unphosphorylated forms of the largest subunit of RNA pol II.

**Buffer:** PBS containing 0.2% gelatin, 0.01% thimerosal, 0.1% sodium azide, and 50% glycerol. Thimerosal and sodium azide are highly toxic.

### Application Notes:

Applications Validated by Active Motif:

ChIP: 10 µl per ChIP

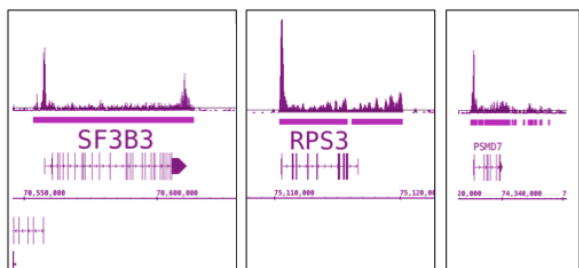
ChIP-Seq: 20 µl each

WB: 1:2,000 - 1:5,000 dilution

For optimal results in Western blotting, primary antibody incubations should be performed overnight at 4°C. The addition of 0.1% Tween 20 to all blocking solutions may also reduce background. Individual optimization may be required.

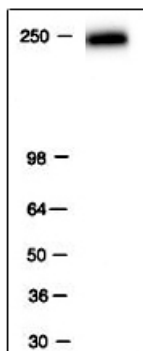
**Storage and Guarantee:** Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This 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 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 20 ul of antibody. ChIP DNA was sequenced on the Illumina HiSeq and 30 million sequence tags were mapped to identify Pol II binding. ChIP-Seq data from three specific genes is shown as an example. Pol II binding is detected at the 5' end of the genes, throughout the gene bodies and at the 3' end of the genes.



#### RNA pol II antibody tested by Western blot.

RNA pol II detection by Western blot analysis. RNA pol II is detected in HeLa nuclear extracts using RNA pol II mouse monoclonal antibody at a 1:2,000 dilution.