

AbFlex[®] RNA Pol II CTD phospho Tyr1 antibody (rAb)

Catalog Nos: 91219, 91220

RRID: AB_2793809

Isotype: IgG2a

Application(s): ChIP-Seq, ELISA, IF, WB

Reactivity: Human

Quantities: 100 µg, 10 µg

Purification: Protein A Chromatography

Host: Mouse

Concentration: 1 µg/µl

Molecular Weight: 210 kDa

Background: AbFlex[®] antibodies are recombinant antibodies (rAbs) that have been generated using defined DNA sequences to produce highly specific, reproducible antibodies. Each AbFlex antibody contains a 6xHis Tag, a Biotinylation Tag for enzymatic biotin conjugation using the biotin ligase, BirA, and a sortase recognition motif (LPXTG) to attach a variety of labels directly to the antibody including fluorophores, enzymatic substrates (HRP, AP), peptides, drugs as well as solid supports. AbFlex[®] RNA Pol II CTD phospho Tyr1 antibody was expressed as full-length IgG with mouse immunoglobulin heavy and light chains (IgG2a isotype) in mammalian 293 cells.

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

Buffer: Purified IgG in 140 mM Hepes, pH 7.5, 70 mM NaCl, 32 mM NaOAc, 0.035% sodium azide, 30% glycerol. Sodium azide is highly toxic.

Application Notes:

Applications Validated by Active Motif:

ChIP-Seq: 4-10 µg per ChIP

IF: 0.5 - 2 µg/ml

Bead-based ELISA: 0.5 - 10 µg/ml

WB*: 1 - 2 µg/ml

For optimal results, we recommend the addition of 0.1% Tween 20 to all blocking solutions to reduce background. Individual optimization may be required.

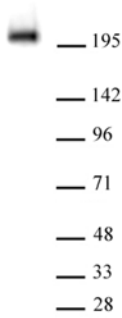
*Note: many chromatin-bound proteins are not soluble in a low salt nuclear extract and fractionate to the pellet. Therefore, we recommend a High Salt / Sonication Protocol when preparing nuclear extracts for Western blot.

AbFlex[®] recombinant antibodies are genetically derived from DNA sequences of parental hybridoma clones. For details on the parental clone, see Catalog No. 61383.

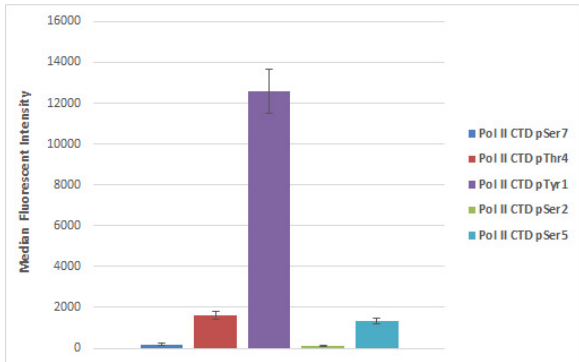
Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product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

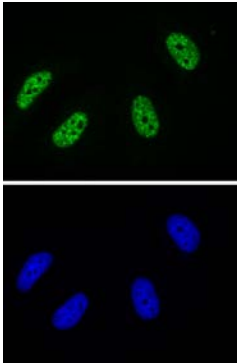


AbFlex[®] RNA Pol II CTD phospho Tyr1 antibody (rAb) (rAb) tested by Western Blot.
 20 µg of HeLa cell nuclear extract was run on SDS-PAGE and probed with AbFlex[®] RNA Pol II CTD phospho Tyr1 antibody at 2 µg/ml.



AbFlex[®] RNA pol II CTD phospho Tyr1 antibody (rAb) tested by Luminex bead-based specificity analysis.

Luminex bead-based specificity analysis was used to confirm the specificity of AbFlex RNA pol II CTD phospho Tyr1 antibody (rAb) antibody for RNA pol II CTD peptides. RNA pol II peptides were conjugated to MagPlex Luminex beads and incubated with 500 ng of AbFlex RNA pol II CTD phospho Tyr1 antibody (rAb). Peptide-bound antibody was detected with anti-mouse IgG-Phycoerythrin (PE) and read in a Luminex instrument. Luminex[®] is a registered trademark of Luminex Corporation.



AbFlex[®] RNA Pol II CTD phospho Tyr1 antibody (rAb) tested by Immunofluorescence.
 HeLa cells were stained with 2 µg /mL of AbFlex RNA Pol II CTD phospho Tyr1 antibody (rAb) followed by anti-mouse IgG-488.

AbFlex[®] RNA Pol II CTD phospho Tyr1 recombinant antibody (rAb) tested by ChIP-Seq

Chromatin immunoprecipitation (ChIP) was performed using the ChIP-IT[®] High Sensitivity Kit (Cat. No. 53040) with 30 µg of Raji cell chromatin and 10 µg of antibody. ChIP DNA was sequenced on the Illumina NextSeq and 17.3 million sequence tags were mapped to identify RNA Pol II CTD phosphor Tyr1 binding sites on chromosome 12.

